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ABSTRACT

The final report of the planning phase of Project COULD (Career Orientation Utilizing Language Development) serves a dual purpose: It provides a summary description of the overall project and of each of the units; and it records the interim and final evaluations. Project COULD was conceived as a partial answer to the problem that 60 percent of the children in Coos County had reading difficulties. The project then utilized career concepts indigenous to Coos County to simultaneously improve language skills and provide an early awareness of career opportunities with the development of 18 preliminary units incorporating the following basic objectives: career awareness, language development, and specific unit characteristics. The project evaluation was in two stages. First to assess the conduct of the project, and second to assess the quality level of materials and activities produced. The final evaluative overview showed that the success of the project was due to: (1) the immediate specification of measurable objectives, and (2) the preparation of exemplary curriculum units. The remaining two-thirds of the document includes five appendixes: unit summaries and evaluations, minutes of interim progress review meetings, a calendar of anticipated due dates, exemplary model units, and job descriptions. (Author/BP)

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# CAREER ORIENTATION UTILIZING LANGUAGE DEVELOPMENT

## PROJECT EVALUATION - PLANNING PHASE
1 SEPTEMBER 1971 - 30 AUGUST 1972

UNDER THE
ELEMENTARY AND SECONDARY SCHOOL ACT
OF 1965, TITLE III

CE002726

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# ABSTRACT

The following comprises the final report for the planning phase of Project COULD ("Career Orientation Utilizing Language Development") conducted during the period September 1, 1971 through August 30, 1972. Eighteen curriculum units covering the occupational areas of Lumbering, Fishing, and Diversified Occupations and variously applicable to Grades three through eight have been devised during this planning period. Each of the units--submitted under separate cover--has been developed to the extent that only media development, production, field testing, and teacher "in-service" training remain before they can be regularly incorporated into classroom curricula. This report serves a dual purpose: First, it provides a summary description of the overall project to date and each of the units; and, second, it records the interim and final evaluations of the project.

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# I. PROJECT SUMMARY

## A. Background

Most children reaching high school age are unfamiliar with the various careers that they may choose as an occupation. This situation is to a considerable extent attributable to the fact that most schools have not developed a program of career exploration in the elementary and junior high schools. In fact, the need to develop a greater degree of career awareness is so crucial that the Oregon Board of Education has designated career education development as one of the three top-priority areas of need within the State educational system. In addition to the need for awareness of occupational opportunities, there is a parallel and similarly critical problem in language development. Nationally, the National School Public Relations Association provides us with these grim assessments: "One out of four students has significant reading difficulties"...; and "About one-half of unemployed youth are functionally illiterate". This is reflected in Coos County wherein, according to a survey by Robert Salisbury, District 9 Director of Pupil Personnel: "...sixty percent of the children in grades one through six score below the national average on standardized reading achievement tests".

Project "COULD" was conceived as a partial answer to this dual problem. It would utilize career concepts indigenous to Coos County to simultaneously improve language skills and provide an early awareness on the part of the child as to career opportunities in this locale. The rationale for this coupling of language development to career orientation rests primarily on the generally accepted notion that, by the time a child attains school age, he has learned to speak the grammar and vocabulary characteristic of his home environment. Language development begins with listening, progresses through speaking and reading, and finally to writing. Often the normal language of the school is so alien to the child that it inhibits the normal and satisfactory flow of this developmental process. It seems reasonable then, to supplement existing language arts curricula with activities utilizing the language of the child's extracurricular world.

Project COULD, Career Orientation Utilizing Language Development, was funded in September, 1971, as a one-year planning project. The total budgeted amount of the planning grant was $32,400.00. During this period eighteen preliminary instruction units were to be completed and published. These units, appropriate to grades three through eight, were to reflect the three occupational areas in Coos County that are of prime importance to the local economy - Lumbering, Fishing, and Diversified Occupations (tourism, dairying, special crops, and marketing). The units were to be developed to the point that all necessary guidelines and processes for final unit production and utilization would be specifically identified. Instructional materials development, field testing, and dissemination of the final units would be accomplished under a follow-on operational grant.

## B. Goals and Objectives

Eighteen preliminary instructional units were to be developed and published in the career areas and for the grade levels specified in the following table:

| Grade Level | Lumbering | Fishing | Diversified Occupations |
|---|---|---|---|
| 3 | Logging | Harvesting Fish | Special Crops |
| 4 | Logging Transportation | Harvesting Shellfish | Dairying |
| 5 | Wood Processing | Seafood Processing | Tourism |
| 6 | Marketing Wood Products | Marketing | Marketing |
| 7 | Lumbering Ecology | Ecology | Ecology |
| 8 | Coos County Careers in Lumbering | Coos County Careers | Coos County Careers |

It was established at the onset of the project that the following goals would be appropriate to each of the units. From the standpoint of career awareness, each unit should acquaint the student with the various career possibilities within a given career field to include pertinent economic and environmental interrelationships. From the standpoint of language development, each unit should provide for vocabulary enrichment and concept development as well as enhance his verbal facility. In addition, each unit should permit flexibility in application while remaining inherently complete and sequentially integrated with the various other units in the same career field. From these goals were derived the following objectives to be satisfied by each unit:

CAREER AWARENESS:

1. Define key occupations and job descriptions

2. Specify concepts to be developed regarding
   a. Occupational interrelationships
   b. Economic factors affecting key occupations
   c. Environmental implications of key occupations

LANGUAGE DEVELOPMENT:

1. Specify verbal skills to be acquired

2. Identify concepts to be developed

3. Select vocabulary lists and definitions

UNIT CHARACTERISTICS:

1. Specify instructional alternatives appropriate to each unit

2. Identify horizontal and vertical relationships of each unit and all other affiliated units.

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## C. Results

The project was initially approved and funded for a ten-month period. Subsequently it was extended an additional two months with no change in funding. The full-time Project Coordinator was hired during August, 1971, and the program got underway on September 1, 1971. The initial task was to develop a preliminary task list and schedule for the project.[1] The Project Coordinator then developed an exemplary instructional model.[2] The model was used as a guide by all Unit Coordinators in their development of the units. Specific guidelines were established in the exemplary model with clarifications under each section.

The next activity of the Project Coordinator involved establishment of specific job responsibilities for each of the Unit Coordinators and Teacher Reviewers: the Unit Coordinators were the developers and writers; the Teacher Reviewers acted as unit evaluators.[3] The Language Arts Consultant and Career Education Consultant each acted as in-process evaluators, as well as being required to prepare and submit evaluation reports for each of the eighteen units. The two consultants were IED personnel assigned to the project on a 0.05 FTE basis.

The project hired three Unit Coordinators as writers and thirteen Teacher Reviewers from the six school districts in Coos County. The Unit Coordinators were paid at the rate of $350.00 for preparation of the draft versions of each unit. The Teacher Reviewers were paid at the rate of $100.00 per unit for their contributions.

The eighteen units were completed on schedule in spite of various alarums and excursions and have been submitted under separate covers. The evaluation section (Section II) of this report includes a brief summary of each unit as well as the evaluation results. In addition, the conclusions and recommendations resulting from the conduct of the project are incorporated in that section.

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[1] See Appendix C for calendar of anticipated due dates

[2] See Appendix D for exemplary model unit

[3] See Appendix E for job descriptions of Unit Coordinators and Teacher Reviewers

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# II. PROJECT EVALUATION

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## A. Process and Rationale

At the onset of Project COULD, it was established that the evaluation activities would be conducted with a two-fold object: First, to ensure that the project was conducted in such a manner that the specified goals and objectives would be achieved efficiently and on schedule; and, second, to assess the quality level of the materials produced and the activities performed.

Attainment of this end involved, first of all, consideration of the technical activity involved in the actual preparation of a unit as an aspect of the program separate from the management activities necessary to keep it functioning. A scheme was devised for both the technical and management aspects that allowed for periodic review and evaluation of the program in process as well as post-project evaluation. This scheme is as follows:

### 1. Conduct of Project

The first aspect of an evaluation is an assessment as to the degree to which the various activities contribute towards realization of the pre-specified goals and objectives. This should be done subsequent to project completion in the sense of a "postmortem" examination to identify superfluous or mis-directed activities. In this context object lessons applicable to future endeavors are derived. However, a formal evaluation program designed to provide periodic "in-process" assessments of a project should also be conducted. The purpose is to ensure that the project continues to progress towards those goals and objectives in a realistic and efficient manner. The innovative aspects of Project COULD - particularly with respect to career awareness - made it most desirable to emphasize the "in-process" approach to program evaluation. The natural anticipation was that, if the program were properly carried out, the post-project evaluation would provide few, if any, object lessons in "what not to do".

The prime vehicle in the scheme of "in-process" evaluation that was established consisted of periodic "Interin Progress Review Meeting". These meetings were held periodically, their frequency dependent upon the nature and intensity of project activity. Participants included the Project Director, the Project Coordinator, the Project Evaluator, and such consultants as were needed at a given session. The Project Coordinator would prepare the agenda and report on program "progress-to-date", projected tasks and activities, and current or anticipated problem areas.

Given appropriate discussion and debate, a task listing and schedule would be prepared to delineate the activities to be conducted prior to the next Interim Progress Review Meeting. Minutes of these review meetings were to be prepared by the Project Evaluator. Copies of these minutes are included in Appendix B of this report.

## 2. Unit Evaluations

Regarding the curriculum units themselves, the following course of action was decided upon: The Project Coordinator and the Unit Coordinator assigned to a particular unit would prepare an initial list of goals and performance objectives for that unit. This list would then be reviewed and evaluated by the resident career education (Dr. Ronald Olsen) and language arts (Dr. Fred Packer) specialists. (Their evaluations would be based on the same criteria described below for evaluation of a completed unit.) The specialists' reactions at this point would not be recorded, but rather transmitted directly to the two coordinators. Given subsequent mutually agreed upon goals and performance objectives, the Unit Coordinator would then go about his business of preparing the unit. The resultant draft version of each unit is considered to be the final product of the project. Final, that is, from the standpoint of unit evaluation. At this point the completed unit was submitted to the career education and language arts specialists as well as a teacher reviewer. Each of them was requested to take the unit and evaluate it in accordance with the following method and criteria:

### a. Career Education:

The consulting education specialist was requested to review each unit in turn and subjectively establish

1. How comprehensive the unit is in its identification of the key occupations within the particular career field;

2. Whether the unit is sufficiently thorough in its treatment of each key occupation, and

3. The adequacy to which the career concepts specified as unit goals are developed considering the three factors of occupational interrelationships, regional economics, and environmental implications.

The career education specialist was requested to provide a written report of his evaluation of each unit including his conclusions regarding utilization of the unit "as is" or with major/minor modifications in selected areas. These reports, accompanied by the evaluations of the language arts specialist and the teacher reviewers, are included in Appendix A of this document.

### b. Language Arts:

Similarly the consulting language arts specialist was requested to evaluate each unit and provide formal reports. His evaluation, taking into account the age and educational level of the children for which the unit was designed, is to establish

1. The degree to which the verbal concepts and vocabulary are appropriate to that particular group of children; and

2. The extent to which the various activities incorporated in the unit would be effective in the development of language skills utilizing the specified concepts and vocabulary.

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His reports, again including conclusions and recommendations regarding utilization of each unit "as is" or with modifications, are included in Appendix A.

c. Teacher Reviewers

Each unit was also transmitted to a local teacher for an expert's evaluation to be based on subjective judgement as well as limited classroom testing. This prototype testing was necessarily limited in that the preponderance of the media required in the units remains to be procured and/or developed. Teacher reviewers were requested to consider specifically the following three points in their evaluation:

1. The extent to which the specified concepts, vocabulary, and suggested activities are appropriate to the intended children;

2. The flexibility of the unit in terms of how the instructional alternatives can be applied in a variety of classroom situations and curriculum schemes; and

3. The degree to which utilization of the unit tended to evoke enthusiasm on the part of both the children and the reviewing teacher.

The reports of the teacher reviewers are also included in Appendix A.

## B. Evaluation of Conduct of Project

This section provides an "end-of-project" evaluative over-view of the manner in which Project COULD was conducted during the period covered by this report. The intent is not so much to measure the extent to which the program was "successful", but rather to point out those things that contributed particularly towards the success of the project as well as some of the lessons learned on the way. The rationale for evaluating the conduct of the project is described in section II. A. 1. It outlines the dual approach of in-process program evaluation through the medium of formal interim progress review meetings*, and the final program "postmortem" of this section.

Was the program "successful"? One has to answer "yes", from the standpoint that the eighteen preliminary instructional units were completed on schedule, within the budget, and of sufficient quality and completeness to permit media development and final revision in accordance with unit evaluation results (see Appendix A for these results by unit). However, everything didn't proceed like clockwork. As shown in the minutes included as Appendix B, re-directions and re-groupings were occasionally necessary to keep the program on course. The interim progress review meetings with their attendant re-examination of project objectives and discussions of alternative strategies were found to be adequate as a management control in the face of the difficulties encountered.

The most important single contributor to the success of the project was the specification of measurable objectives right at the beginning. This activity, not as easy or as trivial as it appears at first blush, is the cornerstone of any program where conduct and outcome are to be measured by any yardstick more precise than emotion. Beyond the expected determination of how many units, for whom, on what subjects, and so forth, lay the problem of establishing specific objectives for each unit in the three areas of career awareness, language arts, and educational utility (see Section I. B.). Clarification of these points coincidentally indicated the mechanisms for determining when these objectives were achieved. These objectives were re-examined again and again throughout the project and provided the basis for every major decision along the way.

The second major contributor to program success was the preparation of an exemplary curriculum unit (Appendix D). This unit, prepared by the Project Coordinator with the support of the language arts and career education consultants, served as a test case for all the units. The process of its preparation provided an awareness of the various perils and pitfalls that would be encountered in the real cases. It also served as a vehicle to establish the major aspects of unit content and format prior to assigning the work to others. Preparation of this exemplary unit by the project staff permitted subsequent knowledgeable and uniform direction to be given to the various unit coordinators hired to prepare the actual units.

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*See Appendix B for the minutes of these meetings.

Two significant project activities initially projected were later modified as a result of actual experience. The first of these was the utilization of an Advisory Board. The Planning proposal called for an advisory board that would act upon each of the instructional units as they were produced. This was determined to be unfeasible, and the activities of a formal Advisory Board were replaced by informal interviews with Industrial Advisors. Individual advisors from each industry were consulted by the Unit coordinator during the preparation and review of each unit.* The second major program modification took place as a result of the feedback from consultants and Teacher Reviewers as they evaluated the first units to be produced. There was a clear need to revise unit goals and objectives as well as the format of the instructional design. Appropriate modifications were accordingly introduced.**

In retrospect, it is apparent that the Unit Coordinators were underpaid for the amount of effort that they had to expend in order to prepare a unit. For example, preparation of the first unit draft (L #1, Logging) required more than one man-month. For this the Unit Coordinator received $350.00. Perhaps $500.00 would be more appropriate to the amount and quality of effort required. Conversely, it is felt that the Teacher Reviewers were overpaid. Each of them received $100.00 for substantially less effort than was required of the Unit Coordinators. Finally, it is felt that the diverse efforts of a number of Unit Coordinators could be more efficiently and economically accomplished by a single full-time staff member.

* See Minutes of Interim Progress Review Meeting - Project COULD, October 27, 1971, in Appendix B of this report.

** See Minutes of Interim Progress Review Meeting, March 31, 1972, included in Appendix B of this report.

## C. Evaluation of Curriculum Units

The draft copy of each curriculum unit was evaluated by the language arts consultant, the career education consultant, and at least one teacher reviewer in accordance with the criteria described in Section II. A. 2. The results of their evaluations were combined by the Project Coordinator and appropriate action taken or recommended. Appendix A of this report includes for each unit a summary of its content, the combined results of the specialists' evaluations, and the individual evaluation reports of the language arts consultant, the career education consultant, and the teacher reviewers.

It is emphasized that the unit evaluations were appropriate to the draft copies of each unit. The six units in Lumbering have already been revised in accordance with the evaluators' recommendations. The fishing and diversified occupations units are yet to be revised.

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# APPENDIX A

# UNIT SUMMARIES AND EVALUATIONS

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# UNIT L #1 - LOGGING

## GRADE 3

## UNIT DESCRIPTION

L #1 - Logging

This unit is the first in a series of six instructional units dealing with Lumbering. The unit is designed for grade 3, and the recommended application generally involves thirty minutes of classroom time per day over a four week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, audio tape interviews, transparencies, study prints, instructional sheets, pamphlets, books, 35MM slides and records), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 33 vocabulary words pertinent to 12 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. The many jobs of the logger
    1. Side Rod Foreman
    2. Bull Bucker
    3. Faller
    4. Bucker
    5. Hook Tender
    6. Yarder Operator
    7. Chaser
    8. Shovel Operator
    9. Second Loader
    10. Chokerman
    11. Rigging Slinger

B. Logging Terminology relating to the jobs of the logger

C. The two main types of logging shows
    1. High Lead Show
    2. Cat Show

D. Environmental factors affecting logging
    1. Weather
    2. Geography

E. Influence of logging on the economy

# Evaluation Results

L #1 Logging Grade 3

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and addressing specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated the unit as very appropriate in regard to appropriateness of the material to the children and their grade level.

Flexibility of instructional alternatives rated very high and to such a degree that the Teacher Reviewer even suggested lenghtening the time of the unit in order to cover more of the activities.

The Teacher Reviewer predicted little enthusiasm prior to administering the unit, because the class had just studied logging as it related to a study of shelter. The enthusiasm, to quote the Teacher Reviewer, was extraordinary, and the class was disappointed that they were not able to spend more time with the material.

## II. Career Education Consultant

The Career Education Consultant felt that the unit tended to deal with the occupations in an isolated manner, and that the results lacked comprehensiveness.

For similar reasons, mentioned in the previous paragraph, sufficient treatment of key occupations was lacking in many activities.

The Career Education Consultant stated that the material did show merit, but suggested that to fulfill its development, the economic and environmental sections should be redone.

## III. Language Arts Consultant

The Language Arts Consultant felt that the verbal concepts and vocabulary were within the grasp of a third grader, but stressed that the individual teacher's ability to deal effectively with vocabulary development was the real test.

Further clarification was needed in the development of "concepts" in order that the activities incorporated language skills.

## IV. Conclusions and Recommendations

The word "concepts" was deleted from this and all other units, replaced by "goals", showing a greater correlation with the performance objectives.

A polarization of thought between the consultants and the teacher reviewer was noted in this unit and others; the teacher reviewer usually rated the unit more favorably than the consultants. This polarity may be summarized by concluding that those involved in the actual teaching and those involved in the more theoretical (neither consultant "taught" the unit) viewed the material from different prospectives.

However, the reports of the consultants were seriously considered, and the unit has been revised in accordance with their recommendations.

# Instructional Unit Evaluation Report

Project COULD
Unit L #1: Logging
Teacher Reviewer: Deanna Franson
Milner Crest Elementary School
Coos Bay School District
Grade: 3

Project COULD Unit L #1, Logging Resource Unit, was presented to third graders in Room 9 at Milner Crest School, District 9 during the week of November 29-December 3.

The interest of the children was extraordinary. We had already studied logging as a social studies unit related to our study of shelter. Therefore, I expected a lack of interest from a large percentage of the students. However, they were fascinated by this in-depth of local logging operations. They were very eager to participate in all activities and to demonstrate their understandings of logging. The class was disappointed to have the week allocated to this study come to an end.

At grade three level, the existing curriculum includes the study of the basic needs of food, clothing, and shelter. One of the basic concepts at this level is man's utilization of that which is around him to provide these basic needs. The COULD unit could easily be coordinated with this curriculum -- making students aware of careers in this area which involve local resources. However, to allow adequate development of concepts, it would be necessary for the districts to allow career awareness units to be presented as part of the existing curriculum rather than in addition to the curriculum.

The concepts, objectives and activities presented in Unit L #1 are very appropriate to the general abilities and interests of this grade level. It would be necessary for the individual teacher to adjust the activities of the basic unit to meet the needs and capabilities of each particular class.

In my opinion, the unit was written at a suitable level of difficulty. At no time during the instruction of the unit did I find that students were reaching a level of frustration in trying to understand a concept or an idea. The unit also allows for students to seek understanding which goes beyond the basic material presented. This provides for a wide range of abilities.

The teachability of the unit is excellent as the unit is well organized. Cross references to materials needed for particular activities will facilitate personal planning. This will enable the teacher to devote more time to the actual teaching of the unit. The listing of necessary resources will also assure suitability to the particular unit being taught.

During review of the unit it was evident that the unit had been prepared and set up to easily meet the overall goals and objectives. Using materials available and prepared by the teacher, the students demonstrated the ability of the unit plans to meet the goals and objectives of language development. In their feedback, the students also gave evidence of the ability of the unit to meet the goals and objectives of career awareness. Teaching the unit without the aid of readily available resources supported the flexibility of application. This is necessary to enable the teacher to adapt the unit to any classroom situation.

Provided that suggested resource materials will be readily available to facilitate the teaching of the unit, I felt that materials available were quite adequate. I solicited the assistance of a local faller. He and his partner came to my classroom as resource speakers. Their descriptions of their jobs and the exhibition of their equipment upheld the idea that the resource person and his equipment reinforce learning -- especially at this grade level.

The strong points of this unit are in the planning of the unit for the grade level. It was written at a level that was interesting and understandable to third graders. The suggested activities are varied and appealing to children.

It is my opinion that the suggested length of time required to present the unit be extended. The primary consideration for this suggestion is the usual daily teaching schedule for the third grade level. The daily allotment of time for this area of curriculum is usually thirty minutes. This would necessitate extending suggested total teaching time to five or six weeks to adequately perform activities and to fully develop concepts. I would also suggest that allocation of time for each resource person's time be extended to allow three days for each. This would permit viewing slides or films on the first day to prepare students for the resource person, and allow one complete class period for the resource person's talk. The third day could be utilized as a day for follow-up in the classroom. This follow-up would reinforce what the children had learned the day before.

As an aid to the teacher, I feel it would be helpful to have the background information for teachers arranged in an order of the flow chart. This would give a more total picture of the logging operation. Since my awareness of logging careers had not been developed through the years, the background information for teachers was a necessity for me. Having studied the background material, I still felt I lacked the understanding of the concepts. I inquired around and found a local man who's lifetime occupation was logging. I spent several hours talking with him. He answered my questions and explained the varied occupations and equipment to me. A more sequential organization of the logging jobs would have facilitated my own understandings.

## Evaluation Report

Unit L #1, Logging
Career Education Consultant: Dr. Ronald Olsen
Grade 3

There were basically four aspects considered in the evaluation: One dealt with job descriptions, the second with interrelationships, the third with economics, and the fourth with environmental implications. Generally the unit is in good shape.

### I. Job Descriptions

The basic job descriptions tend to deal in jobs somewhat in isolation and just with those particular duties performed by the individual and does not give flavor for the environment in which that individual works. I would suggest the revision of the job description to give some indication of the hours worked, and the employment outlooks for the next few years. It should also be expanded to include the concepts of "crummy" operators. Some thought should also be given to the maintenance people that keep the equipment operating.

### II. Occupational Interrelationships

I can only find one activity that pointed out directly the interrelationships between the various occupations. Interrelationships were implied in many of the learning activities, but were not the objective of the activity; they were a by-product. The focus once again tended to be on individual jobs and not how those jobs relate to one another. I strongly recommend that at least one activity be generated that would show this interrelationship.

### III. Economic Factors Affecting the Key Occupations

I was very disappointed with the approach taken in terms of economics. The approach tended to be very narrow, one-sided, focusing on what may never be a reality; the elimination of all trees tended to pass over many real economic problems that are faced daily by those in the lumbering industry. One activity may be focused on how technology has eliminated jobs and is eliminating jobs with an idea of helping students to visualize other possibilities or avenues where displaced loggers might go, or what they might do.

Another aspect of this that could be brought in would be the use of helicopters as a possibility of new logging operations with such vehicles as ballons, with the ability to reach new trees and terrain; an entirely new list of jobs is opened up which were never available before, requiring new technology, new skills and new understandings. I feel that this was probably the weakest portion of the entire chapter and should be carefully examined.

## IV. Environmental Implications of Key Occupations

Characteristic of other sections, I felt this one tended to be very narrow. If we define environment as one's surroundings, then this unit focused on just one aspect of those surroundings: conservation.

I think that focus should be made on the key occupations, contrasting lumber camps, technology and home life of today. The idea that loggers get up early and they get home late, technology and modern transportation have changed the loggers life, the idea that the home life is possible today; through this approach we begin to get a feel for the type of individual and work conditions required for these jobs.

Conclusion: The unit is basically good with some exciting activities that would be fun to teach. I do feel that the economic and environment sections should be redone before this unit receives wide use, particularly the economic section. Good first effort but it needs some help.

Evaluation Report

Unit L #1, Logging
Language Arts Consultant: Dr. Fred Packer
Grade 3

I. Validity - Appropriateness of concepts and development of vocabulary to age group:

Concepts: Unit L-1 on Logging states five concepts to be developed with third graders. These concepts are stated in such general terms that even to third graders they would seem either insignificant or nebulous.

The following questions corresponding to the concepts should be asked:

1. What are the various opportunities for employment:

2. What comprises the unique set of terms?

3. What are high lead yarders and cat shows? How does the geography determine the kind of yarding operation.

4. What are the significant environmental factors and what makes them significant?

5. How does logging play on integral part in the total economy of Coos County?

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average third graders. The critical test lies with the individual teacher and her ability to deal effectively with vocabulary development.

II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

1. Activities for Concept 1 seem to be thorough in presenting a variety of occupations and thorough in presenting job descriptions as well as the integration of the various jobs.

Concept 1 is implicit in the activities if the students draw the appropriate conclusions. However, an activity should be initiated to assure or check on these conclusions.

2. Activities for Concept 2 seem to provide effective means for initial understanding of the vocabulary. However, adequate provision is not made for the use of the terms in realistic situations. Consequently, there is limited chance of retention.

3. Activities for Concept 3 seem essentially sound.

4. Neither the concepts or the activities indicate what the environmental factors are. Consequently, effectiveness cannot be determined.

5. The activities for Concept 5 seem to be interesting and thought stimulating. However, the concept is nebulous.

III. Conclusion - In general, the unit is rich in information, terms, and definitions as they relate to logging.

Some of the activities lend themselves well to inducing thought. More of an indication should be given of the reasonable and worthwhile conclusion to be drawn.

The design of the units apparently was to have activities labelled with 1's to correspond with concept numbered 1 and so on through concept numbered 5. Since the concepts lacked strength, it weakened the evaluation of the activities.

Three major recommendations are offered:

1. Expand and clarify the concepts.

2. Develop activities to develop these concepts.

3. Provide for permanence of learning by incorporating activities that encourage real use of vocabulary and concepts.

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# UNIT L #2 - LOGGING TRANSPORTATION

GRADE 4

# UNIT DESCRIPTION

## L #2 - Logging Transportation

This unit is the second in a series of six instructional units dealing with Lumbering. The unit is designed for grade 4, and the recommended application generally involves thirty minutes of classroom time per day over a period of four weeks. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, transparencies, study prints, maps and pamphlets), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher 36 vocabulary words pertinent to 15 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Jobs in transportation
   1. Log Truck Drivers
   2. Stacker Operator - reload yard
   3. Scaler
   4. Lead Yard Man
   5. Yard Bucker
   6. Stacker Operator
   7. Shovel Operator
   8. Second Loader
   9. Dump Operator
   10. Dump Helper
   11. Boatmen
   12. Rafter
   13. Tug Operator
   14. Mechanic

B. Terminology relating to jobs in logging transportation

C. Two main methods of log transportation
   1. Truck
   2. Water

D. Environmental factors affecting transportation
   1. Weather
   2. Geography
      a. Sandstone Belt
      b. Accessibility of trees
      c. Navigable rivers

E. Influence of log transportation on economy

# Evaluation Results

L #2 Logging Transportation Grade 4

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated the material as adequate in regard to level of difficulty. She suggested that more female occupations be included in the unit.

Flexibility of instructional alternatives rated high.

The teacher rated the students' enthusiasm as extremely motivating.

## II. Career Education Consultant

The Career Education Consultant rated identification of key occupations as good and comprehensive. The unit was also sufficient in its treatment of key occupations.

The interrelationships of jobs was rated as high. The economic and environmental sections were adequate but could stand revision.

## III. Language Arts Consultant

The verbal concepts and vocabulary appeared to be adequate and appropriate to the age group.

The Language Arts Consultant felt that the activities appropriately incorporated language skills.

## IV. Conclusion and Recommendations

Although minor revisions need to be made, especially in regard to comments by the Career Education Consultant, the unit will not require any extensive revision.

# Instructional Unit Evaluation Report

Project COULD
Unit L #2: Transportation
Teacher Reviewer: Cherie Larson
Coos River Elementary School
Coos Bay School District
Grade: 4

The students involved in the unit of study on the transportation of logs by COULD were extremely motivated, as well as their teacher. The unit in general was very interesting and fun to do. It also opened a wide range of possibilities for interesting activities. Furthermore, the total COULD project seems to be a good method of familiarizing students with economical, geographical, ecological, and socialogical characteristics of the Coos Bay area.

The most important suggestion I have to offer on the unit of transportation of logs is that there should be a greater emphasis on the more experimental and exciting methods of transportation of logs, for example: helicopter and balloon logging. Since the objective of the COULD project are to familiarize the students with the career opportunities and to motivate them to be interested in the job possibilities of this area, we should try to show them the methods that are now experimental, but may be in the future (when these students are old enough to participate in the job market) the most important methods used. I feel there should be vocabulary, occupation descriptions, and background dealing with balloon and helicopter logging included in this unit. Also there could be several discussions comparing the different methods; with emphasis on the positive and negative features of each method (examples: cost of method, safety of method, availability of fuel (helium must be trucked from Texas), and so on.)

The second suggestion I have to offer concerns the total COULD project. Each of the 18 units deal mainly with male occupations, with the exception of The Travel Industry and Marketing. The girls that were involved were not particularly interested in the material. They enjoyed the activities, but they questioned how this relates to them (it began with one student and developed into quite a discussion). Since this problem came up after the presentation of only part of just one unit, I wonder what type of attitude the girls would have toward career education after three units, which are male oriented, per year for six years.

A third suggestion I have to offer concerns the behavioral objectives used in the unit. I am very familiar with the use of behavioral objectives, and I would agree that the five objectives included in the unit are indeed behavioral objectives which are testable, but more than one is needed per week. There should be one behavioral objective per lesson.

The unit on the Transportation of logs can be covered satisfactorily in four weeks with 30 minutes per day. It is very easily coordinated to the study of the Pacific Northwest in social studies and the Oregon Elementary English Project (which I am piloting) units on language systems. All the material supplied was appropriate in level of difficulty for the fourth year students involved. The unit was very well organized with a variety of activities and possible extensions. In general the unit seems to meet the overall goals and objectives, but I would like to complete the unit to be more certain.

Since we had only one week (four hours) to work on the unit, we did not cover a great deal of the material that was available. It is my opinion that the unit could be taught, without the visual aids that are to be with the unit, very successfully. I would like to complete the unit if it is at all possible.

The students were extremely motivated in most of the activities. The following are some of the activities which were the most successful:

1. Dennis Pope's slide presentation on the tranportation of logs with emphasis on balloon and helicopter logging.
2. The visit of a log truck driver and his truck. (We tried to get a tug boat captain and his tug boat, but haven't been able to yet).
3. "Charades" with the occupations involved.
4. "What's My Line?" with the occupations involved.
5. Flash cards for the vocabulary and occupations -- used in small groups.

The following are minor suggestions I have to offer to improve the unit:

1. The occupation of "choker setter" was completely neglected as related to the transportation of logs, and I feel he should be included.
2. "Spar pole" should be added to the vocabulary list.
3. Vocabulary and occupations relating to helicopter and balloon logging should be included.
4. The crossword puzzle is incomplete. There are no numbers on the squares to correlate with the definitions. Also there should be more small words between the occupations. The list of occupations should be left off, since the students seemed to be doing their puzzles by counting the number of letters in the occupation and the number of squares to fill, instead of by definitions.
5. "Charades" proved to be a good method of familiarizing the students with the occupations.

Upon completing the teaching of this unit I might have further suggestions.

To summarize, the unit on the Transportation of logs is very motivational. Also it has been fun and interesting to do. The total COULD project is an excellent idea and I think it can be correlated easily into the existing curriculum.

# Evaluation Report

Unit L #2, Logging Transportation
Career Education Consultant: Dr. Ronald Olsen
Grade 4

Four aspects dealt with in the evaluation were: (1) job descriptions (2) interrelationships (3) economics (4) environmental implications.

## I. Job Descriptions

Generally, this unit was good. The job description for the occupations were good. Additions that might be made are in terms of hours worked and employment outlooks.

I was disturbed that nowhere could I find any reference made to transportation of chips, and there are probably more drivers employed in the transportation of chips than logs. I think this should be included as part of this unit.

## II. Occupational Interrelationships

The interrelationships of jobs was covered quite well in this unit. However, I still feel that there should be some emphasis made in relation to attitude and its effect on working relationships. An activity may be introduced in which a particular attitude or "mood type" would be imposed upon one of the workers and the effect it would have upon others.

## III. Economic Factors Affecting the Key Occupations

The economic aspect was considerably better in this unit than the first. However, it still tended to be narrow. "No logs to haul" seem to me to be realistic, but there may be a reason for it. Give reasons such as: a mill closure, or no government sale of trees, or perhaps a closure of rivers for transportation.

Then, I think that the unit would have a lot more meaning for kids, if we would move from a macro-economic look to a more micro-economic look. For example, you might look at the log truck driver that is paid by the mile. A new strand of trees has just been purchased that's a hundred miles further away. What effect would this have on his purchasing power of necessities and luxuries? Or possibly, what effect would a union contract to raise wages have upon the individuals purchasing power?

I feel, an approach such as this would have a great deal more meaning to students.

## IV. Environmental Implications of Key Occupations

The present activities are too narrow; rain and sandstone roads just don't make it. It may be more interesting to look at some of the historical developments of logging such as log transportation, changing hours and work conditions, the effect of river transportation on river pollution, the seasonal nature of logging, log transportation in past years as opposed to today, and maybe this environmental section should be handled on a historical approach rather than on the here and now approach.

Conclusion: Generally good - could be taught as is. However, economic and environmental sections need strengthening before final.

## Evaluation Report

Unit L #2, Logging Transportation
Language Arts Consultant: Dr. Thomas J. Walker
Grade 4

### I. Validity - Appropriateness of concepts and development:

Concepts: Unit L-2 on Log Transportation states five concepts to be developed by fourth grade students. The concepts are listed as goals in the prepared unit. Five behavioral objectives for the students have been coordinated with the goals. The stated behavioral objective number three does not correspond to goal number three. The goals seem suitable for ten year olds and appear to adequately cover the topic of log transportation.

Vocabulary: Fifteen key occupation titles and thirty-six descriptive words and phrases make up the vocabulary list. The list seems to be within the capabilities of most ten year olds and should be of interest to them. Study on the vocabulary list should be considered a desirable homework practice since it involves items of community interest. The vocabulary list would be more usable if consideration was given to repeating the definition in some instances, i.e., the definition of "raft" says "see log boom". Referring to log boom, the definition is little more than one line long and could have well been repeated under "raft".

### II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

Suggested activities are bountiful for the unit. The activities should enable the teacher to expose the class to the vocabulary list and concepts to be developed. The activities for concept number three are related to objective number three rather than to the original concept.

III. Conclusion - While some of the aforementioned suggestions could bring improvement, the usability and alinement of the unit material seems to be appropriate for the fourth grade and seems to give adequate coverage to terms and occupations involved in lumber transportation. The unit is well done.

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# UNIT L #3 - PROCESSING LUMBER

GRADE 5

# UNIT DESCRIPTION

## L #3 - Processing Lumber

This unit is the third in a series of six instructional units dealing with Lumbering. The unit is designed for grade 5, and the recommended application generally involves thirty minutes of classroom time per day over a four week period. The unit allows provisions for field trips, instructional media (16MM sound film, sound filmstrips, audio tape interviews, study prints, pamphlets and charts), and classroom visitations by resource personnel from occupations presented. At the option of the teacher, 59 vocabulary words pertinent to 20 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. The many jobs of the millworker
   1. Pondmen
   2. Scalers
   3. Mechanics
   4. Millwrights
   5. Clean-up crews
   6. Secretaries
   7. Engineers
   8. Barker Operator
   9. Graders
   10. Sawyers
   11. Separators
   12. Gluers
   13. Quality Controllers
   14. Machine Tenders
   15. Pullers
   16. Strapper Operators
   17. Loaders
   18. Feeders
   19. Clippers
   20. Patchers

B. Terminology relating to the jobs of the millworker

C. Three main types of milling processes
   1. Saw and Planing Mill
   2. Plywood Mill
   3. Paper Mill

D. Environmental Factors
   1. Affecting the industry
   2. Affected by the industry

E. Influences of the lumber processing industry on the economy

# Evaluation Results

L #3 Wood Processing Grade 5

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated this unit very high in regard to appropriateness of the material and grade level.

She gave personal testimony in regard to the flexibility of instructional alternatives with a high rating.

The Teacher Reviewer also rated the students' enthusiasm and interest as very high.

## II. Career Education Consultant

In the opinion of the Career Education Consultant, the unit was lacking in a comprehensive identification of key occupations. The key occupations that were mentioned were sufficiently dealt with; however, certain occupations, especially management occupations, were entirely void.

Problems were cited in the three areas of occupational interrelationships, environmental and economic sections. The Career Education Consultant recommended that the unit be rewritten before introduction to a class.

## III. Language Arts Consultant

The Language Arts Consultant rated the unit adequate in regard to verbal concepts and vocabulary.

The development of language art skills in the activities was rated as abundant and generous.

## IV. Conclusion and Recommendations

The dichotomy between teacher and specialist (consultant) was again present in the reports. However, the comments and recommendations of the Career Education Consultant merit attention, and the unit required moderate revision with due regard for the evaluation reports. Revisions in this unit have been completed.

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# Instructional Unit Evaluation Report

Project COULD
Unit L #3: Wood Processing
Teacher Reviewer: June C. Brown
Milner Crest Elementary School
Coos Bay School District
Grade: 5

Project COULD Unit L #3 Processing Resource Unit was presented to fifth graders in Room 5 at Milner Crest School, District 9, during the week of January 17 - 21.

The interest of the students was very high. They were quite excited to know we were going to study an industry that was of special importance to their environment. It was particularly interesting to learn about specific jobs associated with processing of lumber. They were eager to participate in the activities and to demonstrate their understandings acquired. The class felt like the week was too short and they were just getting started.

At grade five level, the existing curriculum includes the study of the United States. One of the concepts at this level is the consideration of how man is influenced by his natural environment and the utilization of natural resources. The COULD unit could easily be coordinated with this curriculum - especially in the study of the Pacific Coastal Regions of the United States, specifically Oregon, making students aware of lumber processing which involves a local natural resource. However, to allow adequate development of concepts and objectives, it would be necessary for districts using this material to allow units to be presented as part of the existing curriculum rather than any additions to it. This would be beneficial for students to see how the economy of their community is dependent on, and influences other activities, so much a part of their lives.

The concepts, objectives, and activities presented in Unit L #3 are very appropriate to the abilities and understandings of this grade level. Of course, the individual teacher would adjust the approach and activities to fit the needs and abilities of his/or her class.

During the review of the unit it was evident that activities had been carefully selected and planned to meet the objectives as they were stated. Using materials available (when they have been prepared and are available) and others prepared by the teacher, students will demonstrate the abilities listed in the behavioral objectives and objectives of language development. In the discussion of processing and feed-back from the students, they gave evidence of the ability to meet goals of career awareness also.

The teachability of the small portion I covered was excellent. With all necessary material available (audio-visual aids, resource persons, etc.) this will be a very interesting and beneficial addition to the curriculum. The unit is well organized with activities to emphasize and support concepts and objectives.

The unit is written at a suitable level of difficulty. During our study of the unit the students did not seem frustrated or unable to grasp the concepts or ideas. The activities are well planned for this level, being both a learning experience and fun. The activities are planned to meet the goals and objectives in a very interesting and usable form.

Provided that suggested audio-visual material and other resource material will be readily available to facilitate the teaching of the unit, I feel the material would be adequate. I took my class on a tour of Weyerhaeuser Timber Company sawmill in North Bend as one of the activities suggested. The students enjoyed seeing trees processed into lumber. They were able to describe the jobs and relate the steps in processing during follow-up discussion. This points up the fact that first-hand experience and information is valuable to teach or reinforce learning at this grade level.

It is my opinion that the length of time required to present this unit might need to be extended, especially if it was being coordinated with an existing area of the curriculum. Involved in some of the activities are resource people and the use of research procedures for gathering information. There could be a suggested length of time, but freedom to alter time as the teacher feels is applicable to his/or her class needs. I believe the length of unit could be extended to five or six weeks to adequately develop activities and to develop concepts. Resource people should be allowed at least one complete class period for his presentation. Also a field trip to a mill, or more than one if possible, would take a full class period each. The next day could be used as a day for follow-up in the classroom. This follow-up would reinforce what had been learned the day before.

The background information was very helpful. Even though I was acquainted with the logging industry this information gave me a better understanding of the processing of lumber and the jobs associated with it. With the aid of resource persons and background information I would feel better prepared to evaluate students' understanding of the concepts.

The strong points of this unit are in the extensive planning of the unit for the fifth grade. It was written at a level that is interesting and understandable to fifth graders. The suggested activities are interesting, varied, and actively involve students to develop a better understanding of the lumber industry using acquired language skills to be able to communicate knowledgably in this area.

Another feature I especially consider as a strong point is the format of the instructional packet. Having each section tabulated for easier use and quick reference is great for busy teachers. Also having concepts, objectives, activities, and resource material numbered so they parallel each other is a wonderful asset.

I would strongly recommend the inclusion of Project COULD units in the existing curriculum. Since logging and lumbering are of major importance in our county, children need to understand and have pride in a vocation indigenous to our area. An understanding of the concepts in this unit would encourage better communication between parent and child or between other adults and children of our community.

I think Project COULD Unit L #3 is great and I anticipate using it in full with my classes in years to come. I believe the personnel involved in writing this unit and others like it deserve commendation.

## Evaluation Report

Unit L #3, Wood Processing
Career Education Consultant: Dr. Ronald Olsen
Grade 5

The evaluation will deal with four main topical areas: key occupations, job descriptions, occupational interrelationships, economics, environmental implications of key occupations.

This unit covered a great many jobs and an excellent job was done in fettering out those portions that appeared to be of greatest value. However, there were some serious deficiencies in this particular unit that will be discussed in the various sections.

### I. Job Descriptions

There was duplication of job descriptions in the vocabulary section and background. The job descriptions as outlined in the background, as they presently stand, may be eliminated. There is a need for a more comprehensive job description in the background area if activities suggested are to be carried out. There is a need for wage and hour information as well as employment outlooks. This type of information is called for in the activities and is nowhere available in the units. There should also be some consideration given to the management occupations in the mill.

### II. Occupational Interrelationships

In this section, there was an outstanding job done. Clustering of related jobs was good and generally the entire area was one that would need very little help and consideration. A good job.

### III. Economic Factors Affecting Key Occupations

This section tended to focus on individual workers which was good. However, this section could be improved by showing the students some background on benefits paid employees which currently amount to between 15 and 25% of his salary. Also it might be an interesting activity to have the students discuss whether they would rather receive an additional increase in dollar amount in wages or increased benefits.

### IV. Environmental Implications of Key Occupations

This section had some real problems. The activities section refers to questions that don't exist and then makes second reference to activities that you weren't able to do because the questions weren't available. This entire section leaves a great deal to be desired because no specific activities are given. The activities are to be generated upon the comments of field trips. If nothing comes up in the field trips and there is nothing available in this for activities in the environmental section, you need to do your homework. I suggest you identify some specific mill occupations that have been affected by the Environmental Qualities Council and then use these as examples that may relate to the students and have them identify ways of solving the problems. It may be the throwing of bark back into the slough which they have had to cope with. Maybe the only job that's affected is that of the millwright. Nonetheless, this section has got some problems.

Conclusion: This particular unit should be re-worked prior to the time it is field tested in the classroom. It has some definite problems in terms of job descriptions. It has some definite problems in the Environmental sections. Some minor work should be done in the economic section.

# Evaluation Report

Unit L #3, Wood Processing
Language Arts Consultant: Dr. Thomas J. Walker
Grade 5

## I. Validity - Appropriateness of concepts and development:

Concepts: Unit L-3 on Lumber Processing lists five concepts stated as goals of the unit. The first four stated goals seem to be appropriate for most eleven year old students. While the evaluator is stating no opposition to goal number five, the level of attainment by eleven year olds will necessarily be quite limited. Five performance objectives for students are related to the five goals listed for the project. The performance objectives seem to be generally within reach of fifth graders with reservations for number five.

Vocabulary: The titles of twenty key occupations and fifty-nine descriptive words and phrases make up the vocabulary list. While the list is too long to expect all fifth grade students to spell all words accurately, it is reasonable to expect that all the words can become a part of the speaking vocabulary of fifth graders. It is recommended that the descriptions in the vocabulary list be reviewed for accuracy.

## II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

The recommended activities are generous and adequate. Specific activities are designed for each of the goals and performance objectives with a suggested evaluative procedure to determine whether the students have accomplished the desired objective. The number and organization of the activities are impressive.

III. Conclusion - The unit is adequate in suggested terms, occupational titles and activities for instruction. Teachers should be able to use the materials to adequately teach wood processing into lumber, plywood and paper.

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# UNIT L #4 - LUMBER MARKETING

## GRADE 6

# UNIT DESCRIPTION

L #4 - Lumber Marketing

This unit is the fourth in a series of six instructional units dealing with Lumbering. The unit is designed for grade 6, and the recommended application generally involves thirty minutes of classroom time over a four week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, and pamphlets), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 27 vocabulary words pertinent to 17 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Jobs in marketing
    1. Sales coordinator
    2. Walking boss
    3. Hatch boss
    4. Winchmen
    5. Hold Men
    6. Skillmen
    7. Sales Clerk
    8. Shop workers
    9. Shop foreman
    10. Stock boy
    11. Receiving clerk
    12. Secretary
    13. Bookkeeper
    14. Cashier
    15. Yardmen
    16. Pressure treating plant operator
    17. Button pushers

B. Marketing terminology

C. Wholesale and retail markets
    1. Define
    2. Compare and contrast

D. Environmental factors
    1. Weather - moisture
    2. Termites and insects

E. Economic Relationships
    1. How money earned from sales is used

# Evaluation Results

L #4 Marketing Wood Products Grade 6

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer commented that the appropriateness and the level of difficulty were well-matched with the grade level.

The flexibility of instructional alternatives was rated as high.

In regard to enthusiasm, the Teacher Reviewer noted that students' initial reaction was one of disinterest, but after discussion of the possible future applications of this study to their own lives, students' interest seemed to spark.

## II. Career Education Consultant

Identification of key occupations was rated as good. The Career Education Consultant suggested that more information be included in the background section of the unit to adequately assure that the teacher be prepared.

The Career Education Consultant suggested that additional activities were needed to support the environmental and economic sections.

## III. Language Arts Consultant

The verbal concepts and vocabulary were rated as adequate. The activities that incorporated language skills were rated as impressive.

## IV. Conclusion and Recommendations

Although this unit was rated rather highly, sufficient evidence, by the Career Education Consultant supported revision of the unit. The revisions have been completed.

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# Instructional Unit Evaluation Report

Project COULD
Unit L #4: Marketing
Teacher Reviewer: Thomas G. Mahugh
Coos River Elementary School
Coos Bay School District
Grade: 6

Approximately a week's sampling of the material of this unit was used with the sixth year class at Coos River Elementary Learning Center. The class has thirteen students, eight boys and five girls. Each day between half an hour and forty-five minutes were devoted to the unit. The unit seems well-coordinated to fit into the suggested four weeks teaching time. The appropriateness and the level of difficulty seem to be well-matched with this grade level.

The language development section of this unit seems to be a strong point. The concept is well-developed through statement of the language objective, and the activities are quite adequate to meet the terms of the objective. The games provided, give good practice in becoming familiar with the terms of lumber marketing. Though being a layman in the lumber business, the reviewer would judge the vocabulary list to be quite complete.

All of the COULD prepared activities directed toward aquaintance with careers in lumbering were not available at this time, so it is difficult to comment on their effectiveness. However, by means of field trips and resource speakers, the students were made aware of career possibilities. The field trip outlined in the unit activities suggests a trip to a lumber yard, a chip loading dock, and log loading dock. The question may be asked at this point, if instead of going to two ship loading facilities, would the class get a wider sampling of lumber marketing if they went to a lumber mill? The suggestion in enrichment activity 1-G, of three different groups going to three different places at the same time and then reporting to each other is a very efficient method of exposing the students without overusing the field trip as a teaching tool. Also, by limiting the groups to four or five students, the contact between students and guide is much better than taking the whole class to hear the presentation. The background material given served its purpose very well in giving job descriptions for the key occupations and defining occupational inter-relationships. The job and process flow charts for retail and wholesale sales are a very good idea, however, the retail chart is confusing and difficult to follow as given on page 28. A short explanation of the lines and the rationale behind the chart would be helpful.

The characteristics of the unit seem to be favorable. It is quite flexible, inherently complete, and sequentially integrated. There seems to be no material in excess. A possible need for more material may occur in the area of lumber mills involvement in marketing of lumber. Very little mention is made of this involvement in this unit.

The students' initial reaction to this was one of disinterest. The introduction of the topic of "marketing of lumber" seemed dry to them. After some discussion of the possible future applications of this study to their own lives, their interest seemed to spark. It was rewarding to see one of the class "trouble-makers" take such an interest that he became the class "expert" on the jobs related to lumber marketing. The high point of interest for the class was the field trip taken to Conrad Lumber Company, Weyerhaeuser Mill, and Ocean Terminal Ship Loading Dock. The teacher's attitude was good toward the unit. The unit is an example of practical training and local career awareness that has long been needed in public schools.

## Evaluation Report

Unit L #4, Marketing
Career Education Consultant: Dr. Ronald Olsen
Grade 6

The evaluation will deal with four main topical areas: job descriptions of key occupations, occupational interrelationships, economics, environmental implications of key occupations. This unit covered a very narrow scope of marketing and did an admirable job of the materials covered.

### I. Job Descriptions

The job descriptions were generally good. They were sufficiently broad to cover the major occupations in the marketing area of lumbering indigenous to Coos County. However, in the activities section you ask questions concerning employment outlook and job availability as well as wages that were not available in job descriptions. It is suggested that this type of information be included in the job descriptions to provide the teachers with the background required to answer the questions generated in the activities.

### II. Occupational Interrelationships

Occupational interrelationships were good but I felt somewhat weak. Activities are needed to bring out a greater emphasis on teamwork. Maybe in a terms of a communication problem, that could be introduced. Say the sales coordinator gets the wrong number of box cars, what effect does this error have on the rest of the sales work force? Or say that the manager of a retail operation were to run a sale and he didn't have enough of the materials on hand. A communications problem should be introduced as part of the interrelationships to determine how this affects other workers.

### III. Environmental Implications of Key Occupations

The environmental section was narrow in scope and was probably one of the weaker sections in this unit. I feel that the students should be introduced to the concept that marketing is consumer oriented. That more than the elements (rain, wind and snow) determine what uses can be made of wood. Marketing, being consumer oriented; therefore, what could be made of wood to satisfy human wants, needs and desires would be appropriate. Let the students do some dreaming about new uses for old materials, introduce them to the concepts of paper dresses, paneling, composition board and the various markets that these particular products are aimed towards. These products satisfying demands, a needed element in the environmental section.

### IV. Economics

This was good as far as it went. One of the stronger sections, however, I think that maybe in this particular area ought to get outside of Coos County just a little bit in terms of what determines whether the mill here basically generates a lot of dimensional lumber, a lot of plywood or just what. Possibly you could introduce the students to one aspect of this being the futures market for plywood or other lumber. They could follow in the newspaper the futures and determine how this operates and let students set up a production schedule based somewhat on futures market.

Conclusion: In conclusion, generally the unit was in good shape. It could be used as is but would be strengthened by increasing in job descriptions, an additional activity in the interrelationships, and broadening the concept of environment and economics. The additional activities would make this unit far more representative of the marketing area and increase understanding of lumber marketing in Coos County.

## Evaluation Report

Unit L #4, Marketing Wood Products
Language Arts Consultant: Dr. Thomas J. Walker
Grade 6

I. Validity - Appropriateness of concepts and development:

Concepts: Unit L-4 on Marketing Wood Products listed five desired concepts to be attained by the students. The concepts are listed as goals. Each of the five goals has a related student objective stated in performance terms. The goals and objectives seem to be appropriate for sixth grade students.

Vocabulary: Forty key occupational titles and thirty-two vocabulary words and phrases make up the vocabulary list. Descriptions on the vocabulary list would be more usable if the description was given for each term rather than referring to the description of another term (i.e., fork lift: see stacker). The vocabulary list appears to be within the interest and capabilities of sixth graders.

II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

A generous supply of activities is purposed for use by the teacher. The activities are arranged to correspond with the goals and objectives of the unit. Evaluation activities are suggested for each of the objectives. The purposed activities are not only appropriate but impressive.

III. Conclusion - Unit L-4 should enable a teacher to adequately teach concepts and terms related to occupations in Marketing Wood Products.

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# UNIT L #5 - LUMBER ECOLOGY

## GRADE 7

# UNIT DESCRIPTION

## Unit L #5 - Lumber Ecology

This unit is the fifth in a series of six instructional units dealing with Lumbering. The unit is designed for grade 7, and the recommended application generally involves thirty minutes of classroom time per day over a four week period. The unit allows provisions for field trips, various instructional media (16MM sound film, sound filmstrips, audio tape interviews and pamphlets), and classroom visitations by resource personnel from the occupations presented.

A. Workers involved in environmental quality control
   1. Foresters
   2. Engineers
      a. Axeman
      b. Rear Chainman
      c. Head Chainman
      d. Transit Operator
      e. Party Chief
      f. Levelman
      g. Rodman
   3. Paper Production
      a. Lab Statistician
      b. Lab Stenographer
      c. Lab Technician
      d. Technical Superintendent

B. Technical terminology relating to environmental quality control

C. The different methods used to control the quality of the environment in Coos County

D. The ways in which the quality of the environment affects the economy of Coos County

# Evaluation Results

L #5 Lumber Ecology Grade 7

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and addressing specific areas of concern.

## I. Teacher Reviewer

It should be noted that the students that were involved in reviewing this unit were at least two grade levels below their age group in reading ability, and the Teacher Reviewer also noted that there were emotional and discipline problems within the class.

The unit rated high in appropriateness of material. The teacher felt that there was a direct correlation of the unit to the students own lives.

Flexibility of instructional alternatives appeared mediocre. The teacher found herself inventing her own alternatives and disregarding many of the suggested activities (one must remember that this problem might have been related to the reading and emotional problems prevalent in this class).

The teacher did note enthusiasm within her class, but the enthusiasm, according to the Teacher Reviewer, was related to her own inventive activities.

## II. Career Education Consultant

The Career Education Consultant rated this unit in regard to comprehensiveness as "particularly poor". He noted examples and recommended solutions to the problem.

The Career Education Consultant felt that treatment of key occupations was particularly narrow. There were many occupations that could have been presented that were totally excluded.

The unit lacked in adequate development, and the Career Education Consultant recommended that the entire unit be redone prior to use in the classroom.

## III. Language Arts Consultant

The Language Arts Consultant felt that in general the verbal concepts and vocabulary were within the realm of the average seventh grader, but he again stressed the importance of the teacher and his effectiveness in regard to teaching vocabulary.

Vocabulary and development of language arts skills were incorporated within the activities, but he suggested that there was room for further integration.

## IV. Conclusion and Recommendations

There was general agreement among the evaluators that the unit had problems. The Project Coordinator suggested that the entire unit be revised in accordance with recommendations by the evaluators. The revised unit was shown to the Career Education Consultant, where most of the problems were outlined, and it is now in a modified edition.

# Instructional Unit Evaluation Report

**Project COULD**
**Unit L #5:** Ecology
**Teacher Reviewer:** Bonnie Murray
Michigan Avenue Junior High School
Coos Bay School District
**Grade:** 7

The students scheduled into the Plan Reading Clinic at Michigan Avenue Junior High are at least two grade levels below their age group in reading ability. (According to diagnosis by the George B. Spache Reading Scales) Most of these students, 7th and 8th graders, have a very negative attitude toward school and learning; for them it is usually more experience of failure at attempting to read material that they don't perceive as having anything to do with themselves anyway. For this reason, a program such as COULD that can be directly related to their own lives is especially appropriate. (Robert's dad is a tree planter; Larry assumes that someday he will work in a mill.)

I utilized the vocabulary section from the unit on Ecology as a lesson plan for one week in my 5th period class. This group is mostly 8th grade boys, an especially rowdy bunch which I hoped I could unify more by working on this material. I described the situation to them: we would discuss concepts of environment, ecology, and pollution for three days; on Thursday Dr. Rudy of the Marine Biology Department was going to come and show his slides on pollution in Coos Bay; on Friday we would tour a pulp mill in Empire. As things turned out, neither of the last two events took place. Dr. Rudy had agreed to come, but his daughter had a serious accident that week and he was unable to make it. (We are planning, however, for a date to see the slides anyway this month.) At the last minute we were told that we couldn't bring the class to the mill because of complications with their business insurance.

On the first day of the week it became clear that the students had no workable definition of what is meant by the three concepts we were going to discuss. There was even much disagreement as to whether or not a pollution problem actually exists, and the term 'ecology', especially as distinct from 'environment', was still unclear at the end of the class. The next day we took this up by talking about the different ways that organisms are inter-dependent in nature. However, I don't think anything helped get the idea across as much as a game which we invented on the spot. We had two teams, with one member from each competing as in a spelling bee. I gave an example of something that could be identified with one of the three concepts ( a man smoking a cigarette, pollution; a man eating his lunch, ecology; air, environment). If an example fell into more than one category, they all had to be identified. This led to a lot of hair-splitting discussion, and did much to make the concepts clear. Next, we read a short selection: "The Web of Life", a reprint in The Whole Earth Cataloque. This describes how the balance in nature ecology, can become disrupted. A windstorm in a forest blows down a stand of trees and provides an unusally productive bedding ground for a wood-eating species of beetles. Woodpeckers, which normally keep the beetle population in control, are unable to get at them and the beetles multiply to the point where they devour the entire forest. After reading this as a class, I asked the students to write an essay using the beetle as an analogy for man, and to describe the possible effects on the earth of human over-population. Generally, these papers showed that the objective of verbal facility with these concepts was attained.

I didn't go into the career orientation aspect of the program in my use of the material, but I think that the idea of approaching a description of local occupations on the basis of which ones are involved in protecting the environment is very good. Most kids are, or can become, concerned about the pollution problem, and taking off from anything that concerns them personally is the only meaningful way to lead into an interest in researching the occuptions listed. If the term 'career orientation' implys an objective of any actual personal orientation toward a career, I do not think it should be undertaken at the junior high level. Most of my students are still given over to fantasizing about their future selves -- "I'm going to be famous football player" --, which may be a natural characteristic of the beginning adolescent. The behavioral objectives as stated in the ecology booklet strike me as being much too unwieldly just because there's not enough attention paid to just what value their attainment would have for the student. Too many educational objectives have already failed by not taking the students' desires into account -- and it's my avid conviction that if a kid doesn't want to learn something, he won't anyway.

# Evaluation Report

Unit L #5, Ecology
Career Education Consultant: Dr. Ronald Olsen
Grade 7

## I. Job Descriptions

This section was particularly poor. It covered basically two jobs, that of a forester and the surveyors, and delineated some of the various tasks involved in surveying. My recommendation is that they consider a whole new series of jobs. Forestry is becoming specialized and there should be a number of specific foresters mentioned. Forest technicians and foresters many times do similar tasks but quite frequently a forester has a number of technicians working for him which cover engineering land layout on plans for the surveyors to use. Foresters that work in reforestation, fire control, cruising, contract administration, and silviculture specialists. Another occupation that may be looked at is that of soil scientists. These I feel are far more important in terms of the tasks they perform than are the forester and engineer breakdown that is currently available.

## II. Occupational Interrelationships

There are almost no activities currently generated. There should be some interrelationships shown of how the cruiser and silviculture specialists, contract administration, fire control, and reforestation work together. Maybe flow-charting would do it, maybe following the life of a tree or a stand of trees would be helpful. The number of activities could be generated. It might be interesting to talk with the Bureau of Land Management and pick up some soil maps of Coos County. You could examine these--this is the job of the soil scientist that works with the reforestation engineer and determines which species of trees would grow best in which locality. The silviculture management looks for insects and disease and recommends sprays and fertilizers. Your cruiser determines the value and volume of trees and when is the best time to cut. Your contract administrator works with the purchaser and buyer and sees that the terms of the contract are met.

## III. Economics and Environment

There is currently no information on economics. The environmental section which focuses on the problems is very weak. It is recommended that you combine economics and the environmental sections and take a look at some of the effects of outside pressure groups - State Agencies, Department of Environmental Quality. Look at the reasons for the removal of wigwam burners. The fact that economic pressure rather than environmental pressure has brought about the change. The chips and sawdust, formerly burnt, are now becoming particle board or paper. Maybe historical development of the wigwam burner and its demise might be appropriate. The environment is being cleaned up largely because it is more economical to clean it up than it is to leave it dirty. Your wigwam burner is one example and another is the smaller trees, formerly just left to rot, are now being packed out of the woods. These are being brought out and chipped up and being made into small dimensional lumber because this is economically feasible and not because of public pressure. You might take a look at the holding lagoons for paper industry and the effect that this has on the local environment and the outfall that they are currently talking about. It would be interesting to do some checking on noise levels in factories and the change that has been brought about because of new regulations and noise control. Men are wearing ear muffs in noisy areas.

Conclusion: This entire unit should be redone before being used in a classroom. A different type of job should be looked at in the occupational section and some work done in the economics and a great deal of work I think in the type of activities you refer to in the environmental section.

## Evaluation Report

Unit L #5, Lumbering Ecology
Language Arts Consultant: Dr. Fred Packer
Grade 7

I. Validity - Appropriateness of concepts and development:

Concepts: Unit L-5 on Ecology states four concepts to be developed with seventh grade students. Except for Concept 1, they seem to be within the capabilities of most seventh graders of average intelligence and background.

In each of the concepts, the specific items should be listed, i.e., "various opportunities," "terms," "methods," "economic problems," and "environmental conditions".

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average seventh graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

1. Activities for Concept 1 seem to be quite adequate for acquainting the students with some of the activities of lumbering ecology in Coos County.

2. The activities that mention vocabulary seem to be adequate; however, it would be better to integrate vocabulary with the other activities.

III. Conclusion - In general, the unit is adequate in terms, definitions and occupations for lumbering ecology.

The activities for the development of the concepts and vocabulary seem to have improved greatly through the process of revision.

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# UNIT L #6 - COOS COUNTY CAREERS IN LUMBERING

GRADE 8

# UNIT DESCRIPTION

Unit L #6 - Coos County Careers

This unit is the sixth in a series of six instructional units dealing with Lumbering. The unit is designed for grade 8, and the recommended application generally involves thirty minutes of classroom time over a five week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, audio tape interviews, transparencies, study prints, pamphlets and records), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, all of the previous vocabulary pertinent to key occupations from the previous units are covered in the "activities" sections of the unit. The subject matter is as follows:

A. Occupational possibilities within the lumber industry

B. Lumber industry vocabulary

C. Occupational interest inventory
   1. The test
   2. Use of interpreted results to select areas to be visited during Career Day

D. Career Day - visit areas of occupational interest

E. Job application process
   1. Make out a personal interest inventory
   2. Check with people you wish to use as reference
   3. Make out a resume or personal data sheet
   4. Fill out a job application form

# Evaluation Results

L #6 Coos County Careers in Lumbering Grade 8

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and addressing specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated the unit adequate in regard to appropriateness of material to the age group.

The flexibility of instructional alternatives was rated as good.

In regard to the enthusiasm, the Teacher Reviewer commented, "Interest was no problem, and it was rewarding to see even the slow achiever, because of familiarity at home, respond enthusiastically to terms he was acquainted with."

## II. Career Education Consultant

The Career Education Consultant noted that the basic problems with the unit dealt with its size (over 100 pages) and its organizational design. He recommended that the other units in lumbering be revised before revision of this unit.

## III. Language Arts Consultant

The Language Arts Consultant was also frustrated by the organizational quality of this unit. He gave three recommendations: (1) reduce the number of activities, (2) organize activities in a logical sequence, and (3) transfer resources from the activities section to the resource section.

## IV. Conclusion and Recommendations

There was no alternative but to revise this unit. The entire unit was rewritten, the organization totally revamped, and the basic format of the unit changed.

# Instructional Unit Evaluation Report

Project COULD
Unit L #6: Coos County Careers
Teacher Reviewer: Walter Campbell Jr.
Coquille Junior High School
Coquille School District
Grade: 8

Although my use of Coos County Careers was limited to one week only, I feel that the schedule that is set forth is acceptable, providing the use of the audio-visual aid material mentioned are available. There seemed to be no problem in easing this unit into the curriculum, as the existing curriculum is already divided into sections. A good example of appropriateness is that it can be used in conjunction with or be a good follow-up of our Oregon State History unit. This brings it closer to home. With the vital importance of the lumber industry to the local economy, the appropriateness of the material cannot be stressed enough. With the students' familiarity of the subject of this unit, for example, having many parents working in the industry, the students were quick to grasp the vocabulary and meanings.

Overall, the students were equal to it. The activities and enrichment activities were suited to the students. Of special note, the vocabulary especially, was well worded and easily understandable to any lay person. I also felt that the activities dealing with class discussion were very good. The guide to the unit provided good questions which in turn led to stimulating discussions.

I feel that all of the goals and objectives could easily be met if the unit were presented in its entirety with the teacher utilizing everything outlined in the guide. This of course, would depend upon the availability of the audio-visual aid materials. I can best judge the vocabulary enrichment activities of this unit in that the unit is in a developmental stage and not all of the materials were present. I can say, however, that the vocabulary aspect of the unit were received well by the students and the goals were achieved.

Since the nine week grading period was ending, I used as my nine weeks test a vocabulary list and definitions, and an analysis of the test results were gratifying. They indicated that, on the average, the students did rather well.

On the basis of the vocabulary test and from reviewing and analyzing the entire unit, I feel that the goals and objectives are reasonable for the entire unit and would be as easily attainable as those for the vocabulary.

Regarding the excess and the possibility of additional material, I have concluded that there may be some material in excess, but this is an asset as it allows the teacher to have a wider choice of activities.

Again, since the part I presented to the students concerned vocabulary, my observations are limited to that section. Interest was no problem, and it was rewarding to see even the slow-achiever, because of familiarity at home, respond enthusiastically to terms he was acquainted with.

The strong points I think I have concluded in my previous comments, but perhaps some weak points could be mentioned. As I first began to review the unit, I felt that the vocabulary seemed to be the foundation for all of its work. Therefore, it is not clear to me why the vocabulary should not perhaps be presented in advance of the other activities of the unit. If the audio-visual aids had been available, I would have approached the unit differently and this accounts for my emphasis on the vocabulary aspect. If not presented before, perhaps there should be some way to blend the vocabulary and unit activities more closely together?

If this unit had been completed, I would have been enthusiastic about presenting the entire unit to my students. The one week I did spend on the material was worthwhile. This kind of unit has special merit due to the fact that it deals with an area familiar to the inhabitants of this area. I feel that the unit has benefited not only those students who are from homes where the lumber industry is a way of life, but also those who live in this area which is economically dependent upon the lumber industry. And finally, I too learned a great deal more about the lumber industry of Coos County.

## Evaluation Report

Unit L #6, Coos County Careers in Lumbering
Career Education Consultant: Dr. Ronald Olsen
Grade 8

Unit L #6 is a culminating activity in effect of all other logging units. It deals with Coos County careers and pulls sections from the preceding five units. In so doing, the continuity of the unit is somewhat lacking. The activities do not logically flow from one series of activities to the next. I'm sure some work is currently being done to improve this area.

### I. Job Descriptions

The job descriptions, the way they are combined and put together is good. However, reference needs to be made of where detailed descriptions can be found. Maybe a supplement listing all the job descriptions would be appropriate.

### II. Occupational Interrelationships

The occupational interrelationships are available in some units and in some sectional areas they are not. I would suggest that this be the last unit to be revised and that corrections and additions made in previous units be examined in relation to the sections used in this unit. Where changes were made in other units, make the appropriate changes in this unit.

### III. Economics

A deviation from the format previously followed is the one of job interviews, which is quite extensive in terms of developing confidential files on each one of the students. This is an excellent activity. One thing that may make it more realistic from an economic standpoint would be to have the students examine the wages in terms of contrasting this with expenses to operate a car, house, utilities, insurance, etc. Such an activity might give the students a better perspective on the cost required to run a household and its direct effect on the type of employment one might want to go into.

Conclusion: The unit has strength and it has weaknesses. As the previously identified corrections are made in other units and incorporated into this unit, this unit should take on more continuity in format of activities.

# Evaluation Report

Unit L #6, Coos County Careers in Lumbering
Language Arts Consultant: Dr. Thomas J. Walker
Grade 8

## I. Validity - Appropriateness of concepts and development:

Concepts: Unit L-6 emphasizes careers in the four concepts to be developed by eighth graders. This unit differs from L-2, L-3, and L-4 in that the concepts have not been restated in terms of major goals. The four concepts are accompanied by four corresponding behavioral objectives the students are expected to perform. The concepts and objectives seem to be appropriate and within the capabilities of eighth graders.

Vocabulary: The vocabulary list for Unit L-6 comprises the total list of key occupations and the unique terms from the Units L-1 through L-5. The list is long but should actually be review for students who have been exposed to the five preceding units. The occupational titles and terms used seem well within the capabilities of average eighth grade students.

## II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

A variety of activities are suggested for Unit L-6; however, the activities seem to lack planning and organization. The activities appear to be a sum total of the activities presented in the preceding five units. This practice may result in boredom for eighth graders. The following recommendations are suggested by the evaluator:

1. Reduce the number of suggested activities, selecting those most appropriate for eighth graders.

2. Organize the activities into a logical sequencial pattern with behavioral objectives in mind.

3. Transfer resources currently located in the activities section to the resource section.

## III. Conclusion - The unit is adequate in occupational terms and definitions and is appropriate for presentation to eighth graders; however, the preceding recommendations should be noted.

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# UNIT F #1 - HARVESTING FISH

## GRADE 3

# UNIT DESCRIPTION

## Unit F #1 - Harvesting Fish

This unit is the first in a series of six instructional units dealing with Fishing. The unit is designed for grade 3, and the recommended application generally involves thirty minutes of classroom time per day over a four week period. The unit allows provisions for field trips, various instructional media (16MM sound film, sound filmstrips, study prints, pamphlets and books), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 52 vocabulary words pertinent to 4 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Jobs in harvesting fish
   1. Captain
   2. Deck Hand
   3. Sales Clerk
   4. Stock boy

B. Trolling and trawling terminology

C. Commercial trolling and trawling processes
   1. Drag Fishing
   2. Trolling for salmon
   3. Trolling for tuna

D. Environmental factors
   1. Influence by the industry
   2. Influence on the industry

E. Economic influences of the fishing industry in Coos County

# Evaluation Results

F #1 Harvesting Fish Grade 3

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and addressing specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated this unit high in regard to appropriateness of material, and stress that the language development aspects were nicely coordinated with the career awareness (orientation) aspects.

The Teacher Reviewer was satisfied with the instructional alternatives, but suggested more activities that could be incorporated within the unit.

The degree of enthusiasm was rated high. The Teacher Reviewer had supporting evidence in this regard; this unit was presented to two different groups of children with different abilities and enthusiasm was positive in both groups.

## II. Career Education Consultant

The Career Education Consultant felt that the occupations presented were quite adequately developed, but noted that more occupations should have been presented; i.e., boat maintenance, etc.

Thoroughness in the treatment of key occupations was rated adequate, but the Career Education Consultant felt that contrasting fishermen of today with fishermen in 1900 would make some good activities.

Although the occupational interrelationships were well done, the Career Education Consultant felt that the unit was weak in the environmental and economic sections. He suggested revision before being presented to students.

## III. Language Arts Consultant

There were no difficulties noted in the verbal concepts and vocabulary development in regard to level of difficulty.

However, the Language Arts Consultant suggested incorporating the vocabulary more directly with the activities.

## IV. Conclusion and Recommendations

With the exception of the Career Education Consultant, the evaluators feel that the unit is presentable in its present form. Minor revision should be made; the goals need to be modified and the performance objectives are not currently stated in performance terms.

With these corrections, and serious consideration of the Career Education Consultant's report, the unit is presentable.

# Instructional Unit Evaluation Report

Project COULD
Unit F #1: Harvesting Fish
Teacher Reviewer: Ellen Garner
Blossom Gulch Elementary School
Coos Bay School District
Grade: 3

In presenting portions of this unit to two different groups of third graders, I had very different reactions. Both groups were extremely interested and the presentation has resulted in several interesting spin-offs.

This unit could be coordinated with English in any on-going Language Arts program. Many techniques for research could be taught--i.e., note taking, interviewing, and library skills, too. Third graders would also gain invaluable experience in oral reporting and panel discussions.

To present this unit in its entirety would take much longer than four weeks, probably one could spend as much as eight weeks and at least six depending on interest of the children and how much background they have.

The children in my Language Arts groups,who are having reading difficulty, had difficulty understanding the difference between trolling and dragging boats. Only seven of the twenty-seven had ever been to the Charleston Boat Basin. My high school cadet had worked on fishing boats and his drawings helped. I'm sure your video tapes and slides will make this presentation easier as would a field trip if it could be arranged and allowed by the district. I would suggest having Sara prepare some transparencies with overlays as an added aid. A pamphlet could be prepared using controlled vocabulary (low second grade) except for the vocabulary unique to the fishing industry. This would give handicapped readers a chance to do some reading and research.

In reading this unit before presenting it to the children, I felt my own knowledge was greatly increased but that I would have difficulty presenting the material to third graders, so that they could meet the behavioral objectives. The heterogenious groups made up of boys on a three to one ratio were extremely interested. I'm sure within a six to eight week time all of the concepts could be developed and behavioral objectives met. From the overview we have some research going on about other sea life. We have discussed other ways to make--how families decide to spend money--the interdependence of jobs--etc.

Although there is much material in this unit, I believe all of it is valuable and usable. The crossword puzzles would be difficult for slow third graders. Either children could work in pairs on the puzzles or the teachers could read the definitions for some of the children.

The unit is well organized with the activities appropriate for the grade level. Each teacher using the unit might modify the activities to suit a particular group.

## Evaluation Report

Unit F #1, Harvesting Fish
Career Education Consultant: Dr. Ronald Olsen
Grade 3

This evaluation will deal with four basic areas: key occupations and job descriptions, occupational interrelationships, economic factors, environmental factors.

### I. Job Descriptions

This unit tended to deal more with the how's and what's of fishing than it did with the occupations involved, partly because the number of occupations is so limited. The three or four occupations that are listed seems to be quite adequate. There is a possibility of some additional occupations in the boat maintenance area, but these could be about as numerous as there are difficulties with boats--maybe select electronic maintenance and sales village electronics. One thing, I think, would improve the quality of the descriptions is that most fishermen are independent businessmen, and as such, are plagued with all the problems that go along with being a private businessman such as finances, hours, etc.

### II. Occupational Interrelationships

The interrelationships were available indirectly but adequately so. I almost feel that with the four or five occupations too much time in the activities section was spent in having students work with the occupations. I may be mistaken.

### III. Environmental Factors

It's extremely limited when compared to what could be done with this section. I would like to see activities in here that would contrast fishermen of today with fishing in 1900. What does a well-equipped boat of today look like opposed to what it was in 1900. Bring in the idea of all the electronics equipment and how it has changed the role of the fisherman. Bring out the concept of a need for this equipment because of fewer fish or difficulty in locating fish. Another concept, that I feel should be brought in here or maybe in the economics section, is fishing boats in Coos Bay. The size of the boats here, 30 to 50 feet, as opposed to the foreign fishing fleets that work just off our coast that have boats of 100 to 200 feet long. Is it economical for us to be competitive in the fish market? How do these boats differ besides size?

### IV. Economical Factors

I also felt the economics section was weak. A concept that hasn't been introduced in the logging units and one that should be introduced in this particular unit and really brought home to kids is the contrast between working for oneself as an independent businessman and working for a corporation. I feel this concept is one that is extremely important and one that deserves some thought and consideration on the part of the students. I think that the concept of a good fisherman or highliner should be brought out and their value to the economy, value to their business vs. the Sunday fisherman or summertime fisherman. There ought to be some stress laid in activities in regards to the importance of quality workmanship in fishing and the dollar results. Reference may be made to the Sea Grant Study.

Conclusion: In conclusion, occupational interrelationships seem to be well done. However, there needs to be a revision made before this unit is used in a classroom. I feel the environment and economics sections are the weakest. Two concepts should come through, (1) that of modern technology is changing the role of the fisherman and his effectiveness and (2) most important, the fisherman in Coos Bay is an independent businessman and as such, their efforts and ability to compete are awarded accordingly.

## Evaluation Report

Unit F #1, Harvesting Fish
Language Arts Consultant: Dr. Fred Packer
Grade 3

### I. Validity - Appropriateness of concepts and development:

Concepts: Unit F-1 on fishing states five concepts to be developed with third grade students. These seem to be within the capabilities of most third graders of average intelligence and background.

Concepts 1 and 2, which refer to occupations and vocabulary, either should list the occupations and vocabulary or make a note that they are listed in other sections.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average third graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

### II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

1. Activities for Concept 1 seem to be thorough in presenting a variety of occupations and thorough in presenting job descriptions as well as the integration of the various jobs.

Concept 1 is implicit in the activities if the students draw the appropriate conclusions. However, an activity should be initiated to assure or check on these conclusions.

2. Activities for Concept 2 seem to provide effective means for initial understanding of the vocabulary. However, adequate provision is not made for the use of the terms in realistic situations. Consequently, there is limited chance of retention.

3. Activities for Concept 3 seem essentially sound.

4. Activities for Concept 4 seem to be appropriate to developing the listed concepts depending upon the content of the COULD prepared audio tape recording. A COULD prepared video tape recording might be better for leading the students to drawing the desired conclusions.

5. Activities for Concept 5 are mainly listing, reading, and discussing with little direction for concept development other than the admonition to the teacher that, "The teacher should direct the students to arrive at Concept 5 through questions appropriate to his or her class's conclusions."

### III. Conclusion - In general, the unit is rich in terms, definitions, and information as they relate to fishing.

Some of the activities lend themselves well to inducing thought; however, the desired conclusions should be stated in the respective activities.

In several cases the students are asked to supply answers and draw conclusions before they have obtained the necessary background information.

Permanence of learning could be better provided for if activities were included that would encourage real use of vocabulary and concepts. For example, the activities could include such things as role playing, solving real problems, and direct experiences with fishing.

# UNIT F #2 - HARVESTING SHELLFISH

GRADE 4

# UNIT DESCRIPTION

## Unit F #2 - Harvesting Shellfish

This unit is the second in a series of six instructional units dealing in Fishing. The unit is designed for grade 4, and the recommended application generally involves thirty minutes of classroom time per day over a five week period. The unit allows provisions for field trips, various instructional media (16MM sound film, study prints, pamphlets, sound filmstrips, audio tape recordings, and books), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 48 vocabulary words pertinent to 16 occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Shellfish harvesting processes
    1. Crab
    2. Shrimp
    3. Oyster Farming

B. Shellfish harvesting terminology

C. Key Occupations in the shellfish harvesting industry
    1. Captain
    2. Deck Hand
    3. Carpenter
    4. Corker
    5. Electrician
    6. Laborer
    7. Laborer: shipbuilding yard
    8. Machinist
    9. Painter
    10. Pipe fitter
    11. Oyster planter
    12. Purchasing agent
    13. Secretary-bookkeeper
    14. Stringer
    15. Welder/ship fitter
    16. Yard foreman

D. Environmental influences
    1. By the industry on the environment
    2. By the environment on the industry

E. Economic influences of shellfishing on the economy

# Evaluation Results

F #2 Harvesting Shellfish Grade 4

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated this unit as very appropriate to the fourth grade level and also commented that it was very enjoyable to teach.

In regard to flexibility of instructional alternatives, the Teacher Reviewer stated, "The variety and multitude of activities is what really makes the unit interesting. In having a variety of activities the teacher can choose the best ones for his/her particular group." To further quote the Teacher Reviewer, "The behavioral objectives were well written and co-relate with concepts and activities."

The enthusiasm of the students noted by the teacher was favorable while broadening their experiences and awareness.

## II. Career Education Consultant

The Career Education Consultant felt that the occupations were adequately developed but that there was too much emphasis placed on the process and product.

Sufficient treatment of key occupations was rated as adequate, and excellent use made of supporting personnel. However, job interrelationships could have been expanded.

The Career Education Consultant felt that the unit could be used in its present form, but he recommended revisions be made in the economic, environmental and interrelationship sections according to his recommendations.

## III. Language Arts Consultant

The Language Arts Consultant again felt the level of difficulty in regard to verbal concepts and vocabulary was within the grasp of fourth graders.

The activities incorporated within the unit were generally effective in the development of language art skills.

## IV. Conclusion and Recommendations

With the exception of minor revisions in generally format, this unit appears solid and adequate. No major revisions are necessary. All three evaluators felt that the unit was adequate or better.

# Instructional Unit Evaluation Report

Project COULD
Unit F #2: Harvesting Shellfish
Teacher Reveiwer: Cherie Larson
Coos River Elementary School
Coos Bay School District
Grade: 4

The unit on harvesting shellfish for the 4th year students was very enjoyable to teach. The variety of the activities to choose from is a very good factor. The completion of the audio-visual aids will hopefully make the unit more meaningful for the students; easier for them to understand the methodology of harvesting shellfish and shipbuilding.

The format of the unit is easy to use.

There should be mention in the outline that much of the unit deals with shipbuilding. The outline is misleading, along with the title of the unit.

The concepts are easy to work with and do apply to the five sections of the unit quite well.

The behavioral objectives were well written and correlate with the concepts and the activities.

The vocabulary section should be used as a teacher aid, and not for distribution to the students once the unit is complete. Given the list of words the student should be able to find their meanings in books, audio-visual aids, lectures, field trips, discussions, etc.. Also several of the definitions are much too long.

The activities section is very well done. The variety and multitude of activities is what really makes the unit interesting. In having a variety of activities the teacher can choose the best ones for his/her particular group.

The crossword puzzle is a mess. The numbers are the problem. There are two 1s, two 2s, two 3s, and so one. There is a 1 for across and a 1 for down, etc. making the whole thing very confusing.

The section on how the fisherman spends his money is very interesting and would correlate well with math and money management. I have not had a chance to use this section yet, but I am looking forward to using it in about a week.

The list of resource speakers has been of great help. We have used the following in the unit:

Paul Heikkila- lecture and slide show - 3-28-72
Qualman Oyster Farm - field trip - 4-4-72
(I took some slides which might be of use to the unit.)
Kelly Boat Works - field trip - 4-11-72
Nelson Log Bronc Co. - field trip - 4-11-72
Paul Rudy - lecture - 4-14-72

These people have really made the unit a success, by making the things real for the students.

The section covering the background is excellent. It was very well put together and covered a great deal of material fairly concisely. But....the flow chart on shrimp trawling is very lengthy and it is hard to work with.

The unit would take the suggested five weeks at about four hours a week plus field trips and speakers (without audio-visual aids). With the audio-visual aids it would probably take six weeks.

This unit is easily coordinated with existing curriculum, since the 4th year students study the Pacific Northwest. Also it is a good supplement for the language arts program and the science program.

The material is very appropriate for 4th year students. The reading level is a little high on vocabulary and occupations, but they pick these up with games and activities.

The unit meets the overall goals and objectives. The students become able to use vocabulary of the shell fishermen and shipbuilders. Also they become very aware of further career opportunities.

In conclusion, the unit was very well done. I enjoyed using the material and my students seemed to enjoy the activities. The unit also broadened their experiences and awareness to the things that are available to become involved with the Coos Bay area.

## Evaluation Report

Unit F #2, Harvesting Shellfish
Career Education Consultant: Dr. Ronald Olsen
Grade 4

The four sections to be considered are: key occupations, job interrelationships, economic factors, and environmental implications of key occupations. Generally, this unit appeared to be in good shape. Like the first unit in the fishing section, this unit because of the limited number of occupations involved in the harvesting of shellfish tended to focus on the process and the product more than upon the jobs.

### I. Job Descriptions

The occupations presented seem to be adequate. Excellent use made of supportive personnel. A couple of corrections might be made in the job descriptions. Carpenters used in the shipbuilding industry in Coos County are non-union. Therefore, they are not journeymen. The pay and outlook in jobs should also be included.

### II. Occupational Interrelationships

If the enrichment activities aren't followed, there is very little done, in terms, on interrelationships. Possibly the one area that could be broadened is that of the processor. The idea that the processor purchases the shellfish at varying prices might be brought out. One thing that might come up is a communication problem. A new price agreement for fish and what effect would this have upon the various people involved. Maybe some short role playing situations such as the captain going to leave at a set time and the deck hand didn't make it, or if the boat in for repairs was going to be ready at a certain time but because of problems, it wasn't ready to go.

### III. Economic and Environmental Factors

It appears to me this section was rather narrow. A couple of points, I think, would strengthen it. One is to concentrate more on the seasonal working conditions when harvesting takes place and the miserable rain they have to work in. A second is in terms of a historical development of oyster farming here in the Coos Bay area. The effects that waste sewer and pollution has had on the majority of oyster beds and why they are located where they are today. You might want to talk with Jim Piercey out at SWOCC in terms of the net modification in the dragging techniques that have been used in the last few years so that the small rock shrimp can be caught. The need for constant education to keep up with changes. You may want to take a look at the effect that the floods in Clatsop County in the spring of 1972 had on the oyster beds in that area, could similar things happen here? Why? Why not? What would be the effect? I think that an activity dealing with the cost of boat operation, the fact that many boats used are multipurpose boats. They are used for shellfish harvesting as well as harvesting fish and the reasons why. You may want to introduce the effect of a captain putting out a string of crab pots and a storm comes up and he looses half a dozen pots in one night. What effect is this going to have on his expenses at 45 to 60 dollars a pot. I think that it is important once again to stress the small businessman concept and the importance of quality workmanship.

Conclusion: In conclusion, this unit could probably be used as is. However, I strongly recommend a revision of the economic and environmental and interrelationship sections along the lines I've suggested.

## Evaluation Report

Unit F #2, Harvesting Shellfish
Language Arts Consultant: Dr. Fred Packer
Grade 4

I. Validity - Appropriateness of concepts and development:

Concepts: Unit F-2 on fishing states five concepts to be developed with fourth grade students. As stated, these seem to be within the capabilities of most fourth graders of average intelligence and background.

Concepts 2 and 3 which refer to vocabulary and occupations either should list the vocabulary and occupations or make a note that they are listed in other sections.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average fourth graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

1. Activities for Concept 1 seem essentially sound.

2. Activities for Concept 2 seem to provide effective means for initial understanding of the vocabulary. However, adequate provision is not made for the use of the terms in realistic situations. Consequently, there is limited chance of retention.

3. Activities for Concept 3 seem to be thorough in presenting a variety of occupations and thorough in presenting job descriptions as well as the integration of the various jobs.

Concept 3 is implicit in the activities if the students draw the appropriate conclusions. However, an activity should be initiated to assure or check on these conclusions.

4. Activities for Concept 4 seem to be appropriate to developing the listed concepts. A COULD prepared video tape recording might be better for leading the students to drawing the desired conclusions.

5. Although worthwhile, the activities for Concept 5 may or may not develop the desired concepts.

III. Conclusion - In general, the unit is rich in terms, definitions, and information as they relate to shellfish harvesting.

Some of the activities lend themselves well to inducing thought; however, the desired conclusions should be stated in the respective activities.

In the activities calling for oral reading, a directed reading approach would be more sound.

Permanence of learning could be better provided for if activities were included that would encourage real use of vocabulary and concepts. For example, the activities could include such things as role playing, solving real problems, and direct experiences with fishing.

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# UNIT F #3 - SEAFOOD PROCESSING

## GRADE 5

# UNIT DESCRIPTION

## Unit F #3 - Seafood Processing

This unit is third in a series of six instructional units dealing with Fishing. The unit is designed for grade 5, and the recommended application generally involves thirty minutes of classroom time per day over a six week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, audio tape recordings, transparencies, study prints, and pamphlets), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 44 vocabulary words pertinent to 24 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Seafood processing methods
  1. Processing crab
    a. Live
    b. Shell
    c. Meat
  2. Processing shrimp
    a. Machine picking
    b. Hand picking
  3. Processing Bottom-fish
    a. Filleting
    b. Rexing
  4. Processing oysters

B. Seafood processing terminology

C. Jobs in the seafood processing industry
  1. Dock worker
  2. Laborer
  3. Crab grader
  4. Backer
  5. Crab pickers
  6. Canner
  7. Packers
  8. Floor lady
  9. Shuckers
  10. Oyster farm laborer
  11. Fillet floor lady
  12. Oyster graders
  13. Filleters
  14. Secretary
  15. Bookkeeper

D. Environmental factors
  1. Influences by the industry
  2. Influences on the industry

E. Economic influences of the seafood industry on Coos County

# Evaluation Results

F #3 Seafood Processing Grade 5

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer tended to avoid the format of questions that were developed, but results were obtained.

The teacher felt that all of the children profited from the presentation of this unit, and that it was appropriate to the age group in regard to the level of difficulty.

Flexibility of instructional alternatives rated high. It might be noted that the Teacher Reviewer only presented one segment of the unit and was able to adequately use alternative activities.

Enthusiasm of the students rated high, especially in regard to the unit using resource personnel, such as Bob Mullen, Aquatic Biologist, from the Oregon Fish Commission.

## II. Career Education Consultant

The Career Education Consultant again brought out that although the unit was quite comprehensive in identification of key occupations, the material again stressed process in opposition to occupations.

The degree of thoroughness was rated as adequate but could be expanded.

The Career Education Consultant felt that the material was adequately developed, but the economic and environmental sections could be expanded.

## III. Language Arts Consultant

The verbal concepts and vocabulary were considered adequate with emphasis, once again, placed upon the teacher's effectiveness.

With reservations minimal, the Language Arts Consultant felt that the language art skills were adequately incorporated within the unit.

## IV. Conclusion and Recommendations

This unit could be used with minor revisions in basic format. Although none of the evaluators commented on the objectives, the Project Coordinator recommends that the goals and objectives be rewritten. Some attention to the evaluation reports should be given, but this would entail only minor revisions.

# Instructional Unit Evaluation Report

Project COULD
Unit F #3: Seafood Processing
Teacher Reviewer: Clarie Summers
Powers Junior High
Powers School District
Grade: 5

My one week presentation of this unit was planned around one topic - shrimp processing with a quick look into oysters. I took this aspect of the unit because of the availability of seeing the work done on a field trip.

We spent one day researching shrimp and oysters, (Activity 1-A) one day discussing the vocabulary involved, and some of the jobs, (Activity 2-A, 1-L, and 1-N), and the following day was a field trip. (Activity 1-J)

The activities that I used seemed to be quite complete and easy to follow. The group that I have been working with contains many slower students, thus the time required for some of the activities nearly doubled. With a slower group it would be necessary to eliminate some of the activities in order to finish in a four to five week time allotment. Interest would probably lag after this long.

This can be incorporated into many parts of the present curriculum, since it deals with science, social studies, and language arts activities. Since this is somewhat seasonal, I feel it should be taught when one can take advantage of seeing the actual processes.

After one week of working with Shrimp Processing, most of the students were able to describe the terms in the vocabulary list and were much more aware of what went on in the bay and Charleston area.

We took our field trip to Peterson's Seafood on Wednesday. This was needed for the week's work due to the lack of prepared material. I feel a field trip such as this is essential in the early part of the unit to help build interest and background. A trip at the end would be wise for a review of all the terms and jobs learned during the unit.

Everyone at the seafood plant was very helpful and the children were interested in all aspects. We also visited Qualmans Oyster Farm for a contrast of a small operation and very large one.

The following week we had a guest speaker - Bob Mullen, Aquatic Biologist from the Oregon Fish Commission. He brought slides and talked about commercial fishing and the research that goes into making laws governing fishing. He talked also about ecology and the part environment plays in the fishing industry. This was of interest to the children in that he talked about concerned areas like Powers.

Most of the students liked the things that were discussed and the activities that we had planned. Study of things nearby means more to them than far off places.

I think something of this kind does belong in our course of study. I learned many things from it and I am sure the children found out practical knowledge that will be usable to them.

# Evaluation Report

Unit F #3, Processing Fish
Career Education Consultant: Dr. Ronald Olsen
Grade 5

This evaluation will deal with four basic areas: key occupations and job descriptions, occupational interrelationships, economic factors, and environmental factors. Generally, this unit appeared to be in good shape and could be used as is. However, a number of points should be considered.

## I. Job Descriptions

Once again, this unit tended to deal more with the process involved than with the occupations, bringing in the occupations only indirectly. However, there were a number of activities that brought home the various tasks performed in the jobs. The number of occupations covered in the job descriptions seems to be adequate. However, the job descriptions themselves should be enlarged. Most of the jobs listed are seasonal, however, the job descriptions in most cases do not reflect this aspect of the work. They should also give some indications of the pay in relation to various other jobs in the industry.

## II. Occupational Interrelationships

The interrelationships are implied more than actual. I feel that dependability should be stressed with a number of contrived role playing situations. The student is the supervisor of a particular area of dock workers and he comes around the corner and finds a couple of guys fighting, what should he do? Here is the floor lady in the fillet room and half the crew is an hour late for work, what would you do? Let them work out and think about some problems.

## III. Economic and Environmental Factors

I feel a historical look at processes would be appropriate. Showing a contrast of process resources in 1972 as opposed to the turn of the century. The idea that we used to dump our waste back in the bay and rivers and now in many cases it is processed and is used as fertilizers or mink food, etc.

Economic factors, once again tended to be narrow. I think that we should take a look at where tuna is processed and why isn't it processed here? What would be required for tuna to be processed here? Peterson's Seafood Cannery is talking about putting in a filleting machine, what effect would this have on those people who are involved in the filleting operation? Also, it wouldn't hurt to take a look at a couple of other possibilities for seafood processing on a home scale in terms of Curly and Irene's type of operation and why (refer to F #4).

Conclusion: In conclusion, the unit was in generally good shape and could be used as is, but I think that additional effort needs to be made in the economic and environmental sections. Possibly with the elimination of some of the activities and the coverage of the processing.

# Evaluation Report

Unit F #3, Seafood Processing
Language Arts Consultant: Dr. Fred Packer
Grade 5

I. Validity - Appropriateness of concepts and development:

Concepts: Unit F-3 on seafood processing states five concepts to be developed with fifth grade students. As stated, these seem to be within the capabilities of most fifth graders of average intelligence and background.

Concepts 2 and 3, which refer to vocabulary and occupations, either should list the vocabulary and occupations or make a note that they are listed in other sections.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average fifth graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

II. Reliability - Effectiveness of activites in relation to concepts and vocabulary:

1. Activities for Concept 1 seem essentially sound; however, the enrichment activities of field trips and resource speakers seem to be more worthwhile than the basic lessons and therefore should be basic rather than enrichment.

2. Activities for Concept 2 seem to provide effective means for initial understanding of the vocabulary. However, adequate provision is not made for the use of the terms in realistic situations. Consequently, there is limited chance of retention.

3. Activities for Concept 3 seem to allow for a review of job descriptions. The activities are all of a drill nature and do not present the integration of the various jobs.

4. The oral reading activity in 4-B violates accepted theory and practice in reading instruction.

All the activites lack the vitality and imagination needed to stimulate the depth of thought needed for Concept 4.

5. Although worthwhile, the activities for Concept 5 may or may not develop the desired concepts. An activity should be included that would lead the students to the desired conclusions.

III. Conclusion - In general, the unit is rich in terms, definitions and information as they relate to seafood processing.

Some of the activities lend themselves well to inducing thought, however, the desired conclusions should be stated in the respective activities.

In the activities calling for oral reading, a directed reading approach would be more sound.

Permanence of learning could be better provided for if activities were included that would encourage real use of vocabulary and concepts. For example, the activities could include such things as role playing, solving real problems, and direct experiences with seafood processing.

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# UNIT F #4 - SEAFOOD MARKETING

## GRADE 6

# UNIT DESCRIPTION

## Unit F #4 - Seafood Marketing

This unit is the fourth in a series of six instructional units dealing with Fishing. The unit is designed for grade 6, and the recommended application generally involves thirty minutes of classroom time over a five week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, audio tape interviews, transparencies, and pamphlets), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 32 vocabulary words pertinent to 13 key occupations are covered in the "activities" section of this unit. The subject matter is as follows:

A. Occupations available in marketing seafood on a full or part time basis
   1. Bookkeeper
   2. Canner
   3. Cannery laborer
   4. Cooker
   5. Dock worker
   6. Fillet manager
   7. Fish cutter
   8. Fishing laborer
   9. Manager-assistant manager
   10. Packer
   11. Clerk (sales)
   12. Truck driver
   13. Wholesale - retail market owner

B. Marketing vocabulary

C. Marketing process
   1. Wholesale
   2. Retail
   3. Cannery

D. Environmental influences of the marketing of seafood

E. Economic influences of the marketing of seafood in Coos County

# Evaluation Results

F #4 Seafood Marketing Grade 6

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

This unit rated high in appropriateness of subject matter to the children. The Teacher Reviewer gave examples to support his rating.

The Teacher Reviewer also claimed that the unit had good flexibility and that preparation (teacher preparation) did not require a large amount of time. The Teacher Reviewer commented that there was an abundance of instructional materials and instructional alternatives.

The Teacher Reviewer mentioned that there was high interest throughout the entire unit, and that there were no motivational problems: "The strong points seemed to be the unit relating to the real lives of the students, using words and situations which they already associate with home."

The Teacher Reviewer concluded with a very high rating of the unit and its merit in the schools.

## II. Career Education Consultant

The Career Education Consultant maintained that there was too much comprehensiveness of key occupations and that half of the occupations could be eliminated.

The Career Education Consultant expressed that the entire concept of "marketing" was not clearly expressed in the unit, and consequently the unit lacked in its thoroughness of sufficiently treating the key occupations.

The Career Education Consultant also claimed that the economic and environmental sections were both inadequately developed, but he felt the material could be used as it exists.

## III. Language Arts Consultant

The verbal concepts and vocabulary both appeared appropriate to the grade level.

The Language Arts Consultant felt that the language arts skills were adequate; however, he felt that more oral language activities should be included.

## IV. Conclusion and Recommendations

The familiar polarization of thought exists between the Teacher Reviewer and the Career Education Consultant. With the results obtained from the Teacher Reviewer, the Project Coordinator recommends little revision with the exceptions of general format and goals and performance objectives.

Instructional Unit Evaluation Report

Project COULD
Unit F#4: Marketing
Teacher Reviewer: Wally Lund
Bangor Elementary School
North Bend School District
Grade: 6

The class is a sixth grade in Bangor. The reading level ranges from third to twelfth grade, and levels of work in other subjects have approximately the same range.

Normally, the time span used in this room ranges between thirty to forty-five minutes for the various subjects taught. The sections of this unit fit into that time schedule. The class, however, did not want to stop when we were using the games. So I let them continue until we had no more time or I could see attentions wandering.

This unit fits in very well with word attack skills, word meaning, and verbal facility development. It does not work in well with our present language text. This is not a disadvantage in that language arts cover much more than the language alone.

This unit fit in very well with this class. We had been talking about careers and occupations in general terms before this unit. Another aspect that helped was the presence of two students who had close relatives in the fishing business.

The difficulty level of this unit seems broad enough to provide for a rather large range. All students in the class had successes and the better students had times of challenge.

The two students mentioned above are not the best students in the class, yet they were the ones who shined in this unit, because of the previous verbal facility gained from their close association with the occupations involved. Their work in general improved somewhat during this unit. They were less fearful of attacking new words and very anxious to show off their new prowess. These two also helped me describe the various aspects much more dramatically and in terms the students could understand more readily.

The unit has good flexibility. The preparation did not require a large amount of time. We added a few words to the vocabulary (not my choice). I felt the unit was quite complete, whether this was due to my own ignorance or not, time will tell.

I would rather have too much material than not enough. If the full five weeks of the unit were to be used, then I suppose the guest speakers, slides, and other resources would add much and fill in that much more time. I would also like to be able to make a field trip to see some of the aspects of the marketing.

My class maintained a high interest during this review. The two who had a background helped, and so did the games and market work sheets. I would not suggest any alterations.

The strong points seemed to be the unit relating to the real lives of the students, using words and situations which they already associate with at home. The students liked the games and a few brought more information from home on related occupations (trucking, deep-sea fishing, marketing, bookkeeping, etc.).

I did not find any weak points. We were not exposed to all the resource material, but the material we did have fit in very well with the class interest.

I was pleased to see all students participating with as high an interest as they had.

I have long felt that schools have needed more programs to relate more to the environment and the real aspects of living around them. This unit goes a long way to fill the need to know what all students are able to do, not just those who are bound to college. It was interesting to note that other occupations were brought into discussions as students began relating their own experiences to this unit. This type of preparation can only help prepare students to approach their own adulthood with better preparation and confidence.

## Evaluation Report

Unit F #4, Marketing
Career Education Consultant: Dr. Ronald Olsen
Grade 6

This unit brought out some interesting activities and concepts, but it failed to identify what marketing really is. I think generally we need a definition of marketing.

### I. Job Descriptions

There needs to be an elimination of about half of the jobs in the section. Canning and cooking, fish toters and packers, should be put in section three--fish processing. The definition given in the vocabulary section for wholesale is incorrect. There needs to be a definition in that section for market and there ought to be someplace along the line where there is a definition for a fish butcher, or somebody that is going to be cutting up the fish and putting it on display for resale. In the past, Safeway has had filmstrips available on displaying seafoods. These may not be in circulation anymore, but you might check.

### II. Occupational Interrelationships

The interrelationships in this section really don't exist. I think that too much energy is being given in the activities to beat four or five job words to death. An activity that might be suggested to broaden the scope of marketing and give the kids a better feel for it is to use this line of questioning: What is a market? Where is it at? Why are there different prices offered for fish in Seattle than in the Bay Area? How is the price determined? Why do we send some fish out frozen and some fresh? What effect does this have? I think that an activity that would be very interesting is to tell the students that people determine how fish is prepared, let them then develop a survey. Let them go out and talk with some people around their homes about the type of fish they eat, the amount, their sources of fish, how they prepare it, etc. Then as a consultant team to a super-dooper seafood company, they now have the information to determine how they might change the type of product they sell so that it would increase sales. You might also assign a group of them a case study. A seafood processor in Myrtle Point is now producing dry smoked fish, similar to jerky, and has called you and your marketing consultant team to tell him how he ought to package this up and sell it. It is being produced locally, now how do we go about making it attractive for people? Whose market would they go to? How do you determine the price it ought to be sold at? How do you arrange for getting it to which places and why?

### III. Environmental Factors

I think that in the environmental section there should be some contrast made with the way fish is prepared and moved today as a few years ago. Examine changes in home life and the effect that this has had on the way fish is prepared. The amount of fish eaten in America today as opposed to three or five years ago and the effect this has had on the fishing industry. Wind and rain don't make a heck of a lot of difference in the marketing of fish. It is the development of the economy that makes the difference.

## IV. Economical Factors

In the economics section you may want to pursue the one activity that is there, activity 5-D. Carry it one step further and set up a wholesale operation that sells to the retailers. The wholesaler has the set price that he is going to buy the fish for. The other three groups in the class are retail stores of various kinds. Let the wholesaler set prices and the retailer set prices. Let them determine how they set a price.

Conclusion: In conclusion, there is a number of good activities and lots of good terms in this unit. I would like to see a greater effort made in determining some different jobs. More improvement in the concept of marketing needs to be brought out. There needs to be some activities brought out in the economics section and a whole series in the environmental section.

# Evaluation Report

Unit F #4, Seafood Marketing
Language Arts Consultant: Dr. Fred Packer
Grade 6

## I. Validity - Appropriateness of concepts and development:

Concepts: Unit F-4 on seafood marketing states five concepts to be developed with sixth grade students. As stated, these seem to be within the capabilities of most sixth graders of average intelligence and background.

Concepts 2 and 3 which refer to vocabulary and occupations either should list the vocabulary and occupations or make a note that they are listed in other sections.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average sixth graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

## II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

1. Activities for Concept 1 seem essentially sound, especially if enrichment activity 1-I is utilized.

2. Activities for Concept 1 and 2 seem to provide effective means for initial understanding of the vocabulary. However, adequate provision is not made for the use of the terms in realistic situations. Consequently, there is limited chance of retention.

3. Activities for Concept 3 seem to allow for a review of job descriptions. The activities are all of a drill nature and do not present the integration of the various jobs.

4. The activities lack the vitality and imagination needed to stimulate the depth of thought needed for Concept 4.

5. The simulation situation in the activities for Concept 5 is a good beginning for developing concepts and reinforcing vocabulary.

## III. Conclusion - In general, the unit is rich in terms, definitions, and information as they relate to seafood marketing.

Some of the activities lend themselves well to inducing thought; however, the desired conclusions should be stated in the respective activities.

Permanence of learning could be better provided for if activities were included that would encourage real use of vocabulary and concepts. For example, the activities could include such things as role playing, solving real problems, and direct experiences.

More oral language activities should be included, especially ones that would encourage natural use of the fishing industry.

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# UNIT F #5 - FISHING ECOLOGY

## GRADE 7

# UNIT DESCRIPTION

## Unit F #5 - Fishing Ecology

This unit is the fifth in a series of six instructional units dealing with Fishing. The unit is designed for grade 7, and the recommended application generally involves thirty minutes of classroom time per day over a five week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, audio tape recordings, transparencies, and pamphlets), and visitations by resource personnel from the occupations presented. At the option of the teacher, 35 vocabulary words pertinent to four key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Methods of fishing environment protection
   1. What would you do?
   2. Shrimp and groundfish investigation
   3. Coastal rivers research
   4. Estuary management
   5. Marine extension work

B. Fishing management vocabulary

C. Full and part time jobs in protecting the fishing environment
   1. Aquatic biologist
   2. Management biologist
   3. Experimental biological technician
   4. Marine extension agent

D. Economic influences of the workers on the fishing industry and Coos County

# Evaluation Results

F #5 Fishing Ecology Grade 7

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer felt that the unit was adequate to their age group and that it could be taught to children with a wide spectrum of abilities.

As expressed in the previous paragraph, this unit, as expressed by the Teacher Reviewer, was flexible and allowed for instructional alternatives, especially in regard to its use of instructional media and resource personnel.

The enthusiasm evoked by the material within this unit was felt to be adequate.

## II. Career Education Consultant

The Career Education Consultant expressed that the key occupations were comprehensive and adequate, but he felt other occupations could be included.

The key occupations that are in the unit are sufficient and thorough.

The Career Education Consultant felt that this was one of the finest units prepared with the exception of minor additions to the economic section.

## III. Language Arts Consultant

The verbal concepts and vocabulary were considered adequate by the Language Arts Consultant.

The extent to which the language arts skills were incorporated within the units was more than adequate.

## IV. Conclusion and Recommendations

With the exception of format design, goals and objectives, this unit is sound and will receive little revision.

# Instructional Unit Evaluation Report

Project COULD:
Unit F #5: Ecology
Teacher Reviewer: Linda Miller
Myrtle Crest Junior High School
Myrtle Point School District
Grade: 7

The COULD Project material is quite easy to coordinate with the seventh grade English curriculum. The subject of ecology was new to the existing program but vocabulary, problem solving, group reports, and film viewing and discussion all utilized skills the students were already familiar with.

This unit appears to be designed for average or above-average seventh graders. However, it could be geared down for slower children, if necessary, by going a bit more slowly and having the class discuss more as a large group before problems were given to the smaller groups for solution. Given a longer period of time and an opportunity to prepare more adequately, any teacher should be able to help his or her students meet the goals and objectives suggested by COULD.

Paul Heikkila is a very interesting and competent speaker. The children were impressed by his presentation and they responded well. They felt challenged by the dilemmas facing the fishing industry and their proposals were very close to the ones that he said the United States will be making at the next international convention. It would have been interesting to have heard from a fisherman or one of the biologists listed under possible resource speakers, in addition to Mr. Heikkila, but we were not able to contact any of these people.

Still Waters is an excellent film. More comparisons between the underwater environment and ecology with our own could be made if the teacher wished to pursue them. For this experiment, only the questions suggested were asked and the children had no difficulty in understanding the importance of all the animals in the biological chain.

I feel that if all of the material suggested in this project could be made available the unit has a lot of merit. It is easy to teach because the lessons and alternatives are well defined along with goals and teaching objectives. The material is exceptionally interesting because of audio-visual presentations and suggested live speakers. Printed material can also be supplemented when needed.

# SCHEDULE

NOTE: Where the lesson plan number is listed, the suggested plan was followed very closely.

FIRST DAY: (1-A)

Introduced experiment briefly. Discussed environment. Informed children that we would be having a speaker the following day who would inform them about problems arising from foreign fishing fleets and the twelve mile limit. Gave the students a list of 14 vocabulary words that might be foreign to them and might help them understand the speaker. Discussed vocabulary.

SECOND DAY: (1-B Alternate Activity)

Paul Heikkila spoke to the students about the foreign fishing fleets and the twelve mile limit. He told them about problems involved, but did not discuss possible solutions.

THIRD DAY: (1-D, 1-E)

Reviewed problems presented by speaker. Divided the class into three groups. Each group was given a single problem to solve:

1. Twelve mile limit
2. Foreign fishing fleets
3. Too many fishermen

FOURTH DAY: (cont. 1-E)

Groups worked on solutions to their problem. Organized an oral report to be presented to the class.

FIFTH DAY: (1-F)

One member of each group made an oral presentation to the class. The class discussed the feasibility of the proposals made.

SIXTH DAY:

Finished presentations. Looked at solutions as Mr. Heikkila sees them and discussed the actual proposal that the United States will be presenting at the international convention.

SEVENTH DAY: (1-N, 1-O, 1-P)

Discussed ecology. Viewed film Still Waters. Discussed. Viewed film again.

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Myrtle Crest School
903 Myrtle Crest Lane
Myrtle Point, OR 97458
May 11, 1972

Mr. Paul Heikkila
Coos County Courthouse
Coquille, OR 97423

Dear Mr. Heikkila:

I am very pleased that you will be able to speak to my seventh grade class next week. As Mrs. Gurney told you on the phone, the children would like to hear about any information and background that you might have on the following topics:

Impact of Foreign Fishing Fleets on the Fishery.
The 12 Mile Limit.

It would be helpful if you would tell the children about these problems but not their solution as you see it. Please tell them only about the effects of these two interrelating problems.

Our classes are forty-eight minutes long. Feel free to use all or part of this time.

After your presentation, the class will be broken into small groups and be given the task of proposing solutions to these problems as they see applicable. If you wish to stay and move about talking to the groups and asking questions about the feasibility of their solutions as they discuss them, please feel free to do so.

Sincerely,

(Mrs.) Linda Miller

## Evaluation Report

Unit F #5, Ecology
Career Education Consultant: Dr. Ronald Olsen
Grade 7

### I. Job Descriptions

The job descriptions section I felt could involve several other jobs. I'm not quite sure whether the type of thing I am asking for is already covered with the jobs that are there, but it appears there needs to be State Game Wardens and their functions included. I think your Department of Environmental Quality has their inspector system for sewage and waste solid and liquid waste treatment; your sanitation inspectors for a packing plant, your fishing inspectors for the nets rigging fishing practices, your fish hatcheries and the individuals that operate those, your U. S. Coast Guard for foreign fishing patrol.

### II. Occupational Interrelationships

Inspectors for the most part work in isolation from one another. Your biologists listed work, in many cases, in separate branches and therefore do not work closely with one another or have necessarily related jobs. Therefore, the interrelationships seem to be covered quite adequately.

### III. Environmental Factors

The environmental section is being covered excellently for the whole unit. However, I think that one additional activity could be added, such as a tape of an old timer or a video tape of some kind dealing with fishing today as opposed to yesterday. The amount of shellfish and fish that were available thirty years ago as opposed to now.

### IV. Economical Factors

There should be some work done on the idea that a greater number of the different species of fish caught today are kept and processed in one form or another. There is less waste of fish today then there was a few years ago, resulting in a few more dollars. I think that another area that might be covered is the concerted effort to plant and produce more fish. Man can supplement nature's activities and meet the task with fish hatcheries through the cultivating of beds when nature hasn't been able to keep up with the demand.

Conclusion: This chapter was one of the finest thus far. Addition of a few jobs, maybe one more activity in the environmental section, one or two in the economics and then it would be ready for classroom use.

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## Evaluation Report

Unit F #5, Ecology
Language Arts Consultant: Dr. Fred Packer
Grade 7

I. Validity - Appropriateness of concepts and development:

Concepts: Unit F-5 on ecology states four concepts to be developed with seventh grade students. As stated, these seem to be within the capabilities of most seventh graders of average intelligence and background.

Concepts 2 and 3, which refer to vocabulary and occupations, either should list the vocabulary and occupations or make a note that they are listed in other sections.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average seventh graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

1. Activities for Concept 1 seem essentially sound. The volume of concepts and information may be too great, and consequently each would receive light treatment.

2. Activities for Concept 2 seem to provide effective means for initial understanding of the vocabulary. However, adequate provision is not made for the use of the terms in realistic situations. Consequently, there is limited chance of retention.

3. Activities for Concept 3 seem to allow for a review of job descriptions. The activities are all of a drill nature and do not present the integration of the various jobs.

4. The activities lack the depth and vitality needed to stimulate the thought needed for Concept 4.

III. Conclusion - In general, the unit is rich in terms, definitions, and information as they relate to ecology.

Some of the activities lend themselves well to inducing thought; however, the desired conclusions should be stated in the respective activities.

Permanence of learning could be better provided for if activities were included that would encourage real use of vocabulary and concepts. For example, the activities could include such things as role playing, solving real problems, and direct experiences with ecology.

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# UNIT F #6 - COOS COUNTY CAREERS IN FISHING

## GRADE 8

## UNIT DESCRIPTION

Unit F #6 - Coos County Careers in Fishing

This unit is the sixth in a series of six instructional units dealing with Fishing. The unit is designed for grade 8, and the recommended application generally involves thirty minutes of classroom time per day over a four week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, audio tape recordings and pamphlets), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 12 vocabulary words and all fishing occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Opportunities for employment
   1. Commercial fishing
   2. Processing
   3. Marketing
   4. Ecology

B. Occupational interest inventory

   1. How do you know where your interests lie?
   2. The inventory

C. Steps in applying for a job
   1. Personal inventory
   2. Check with references
   3. The resume
   4. The job application

D. The job interview
   1. Do's
   2. Don't's

E. Employment vocabulary

# Evaluation Results

## F #6 Coos County Careers in Fishing Grade 8

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

### I. Teacher Reviewer

The Teacher Reviewer found that the unit was more than adequate in appropriateness of the material in regard to the children.

The Teacher Reviewer found that the flexibility of the unit in terms of instructional alternatives was so abundant that he was barely able to scratch the surface of suggested activities.

His highest rating came with the students enthusiasm, and he stated, "The strongest part of the unit is the relevance to the students of this area "

### II. Career Education Consultant

The Career Education Consultant suggested that revisions in regard to comprehensiveness of key occupations should be reflected in this unit, but he also contradicted himself by later mentioning that this area appeared to be adequately developed.

The Career Education Consultant had almost nothing to say in regard to thorough treatment of key occupations. One is left guessing at what he means.

The Career Education Consultant noted that there were no activities in the economic and environmental sections of this unit. By this statement, the Project Coordinator feels that the Career Education Consultant did not thoroughly read this unit.

It should be noted that this unit, F #6, is unique in the sense that it used material out of all other units.

### III. Language Arts Consultant

To quote from the Language Arts Consultant, "The amount and difficulty of terms seem to be within the capabilities of the average seventh grader."

The Language Arts Consultant failed in his report to adequately state the extent to which the various activities incorporated language arts skills.

## IV. Conclusion and Recommendations

The Project Coordinator recommends that there be no revisions in this unit. The reports by the Career Education Consultant and Language Arts Consultant are evasive, and the report by the Teacher Reviewer justifies reliability of the unit. However, very minor revisions should be made in the goals and objectives.

# Instructional Unit Evaluation Report

Project COULD:
Unit F #6: Coos County Careers
Teacher Reviewer: Charles Sixberry
Powers Junior High
Powers School District

Grade: 8

The Powers Junior High eighth grade spent seven days studying Unit F #6 (Coos County Careers). In that short amount of time, a great deal of interest was generated. Because of the limited time, adaptations were made to choose highlights of the unit. The class mastered a list of ten vocabulary-spelling words, took one field trip, formulated a list of questions pertinent to commercial fishing and had one guest speaker.

Following is the seven-day outline followed in presenting this unit:

| | |
|---|---|
| Day One: | Trial test of ten spelling words (see attached list #1); assigned list of fifteen terms to be defined (See attached list #2) necessitating use of almanacs, dictionaries and encyclopedias. |
| Day Two: | Students offered and formulated a list of original questions to ask and be answered on the field trip on Day Three (see attached list #3). |
| Day Three: | Field Trip to Qualman's Oyster Farm and Peterson's Seafood in Charleston. |
| Day Four: | Follow-up discussion of field trip and discussion of definitions from list of fifteen terms; use of two hand-outs in discussion (see attached lists #'s 4-5). |
| Day Five: | Final test over ten spelling words; conclusiong of discussion of field trip. |
| Day Six: | Guest speaker; Mr. Bob Mullen, Oregon Fish Commission. |
| Day Seven: | Follow-up discussion after guest speaker. |

I felt the class barely scratched the surface of commercial fishing, but the interest was certainly apparent. Mr. Mullen's presentation (slides and comments) couldn't have been more appropriate for the Powers students as he talked about salmon fishing and conservation in the Coquille and Coos Rivers and showed slides of logging operations which disrupted spawning grounds. He was very good with the students, spoke on their level and answered all of their questions.

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The field trip to Charleston was quite educational for all (including the teacher!) as we learned about and saw first-hand the full cycle of oyster production--from planting to harvesting to deshelling. Mr. Qualman was also very personable and informative.

At Peterson's Seafood, all the officials and personnel were cordial and eager to explain the different facets of a processing plant. The students had many questions and were interested in the different species of fish. They were particularly intrigued at the filleting procedure. The field trip was a very important and valuable part of our study.

I found no difficulty in incorporating this material into my existing Language Arts curriculum. Persuing the entire outline, I see possibilities for creative and informative writing, speaking and research. Admittedly, I packed many activities into a short period of time, but there are sufficient activities and material for a six or nine week presentation. I would suggest a series of study prints dealing with the different species of fish, the boat building industry and the ecological aspects of salmon fishing. Also films dealing with the correct steps in an interview, some of the different occupational aspects of commercial fishing and the oyster industry could be added to the unit.

The strongest part of the unit is the relevance to students of this area. Most of the students are aware of the recreational fishing in southwestern Oregon but few of my students were aware of the importance and occupational possibilities in the commercial fishing industry.

The unit is extremely well organized and quite teachable. There are various avenues to pursue, varied activities that integrate nicely with an existing curriculum and from an initial experience, the students' interest is sure to be captured. None of the material seems too difficult for the students to understand or master.

I was excited about the possibilities in the unit when first exposed to it, but after presenting some of the material to my class, I am even more impressed. The subject matter would be applicable anytime during the school year, but the seven days I spent in May were certainly an end of the year "Shot in the Arm" for my students. I am looking forward to using the material next year for a longer period of time.

List #1

## SPELLING WORDS

brine

shrimp

conveyor

baskets

flume

hopper

Hyster

machine

skip

winch

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List #2

## **SAMPLE VOCABULARY**

## SHRIMP PROCESSING

brine freezer

cold room

conveyor belt

cooking baskets

cooling tanks

flume

hand lift jack

holding room hopper

Hyster

shrimp box

shrimp cooking machine

shrimp machine or shrimp picking machine

shrimp picking table

skip

winch

List #3

# STUDENTS' ORIGINAL QUESTIONS

1. How does one catch shrimp?
2. How does one deshell shrimp?
3. Is there a limit on the number of shrimp caught?
4. Is "picking" and "removing" the same?
5. What is the shrimp season?
6. Is other sealife caught in the shrimp nets?
7. What do shrimp eat?
8. How fast do shrimp grow?
9. What are enemies of shrimp?
10. What is the life expectancy of shrimp?
11. What is the size of normal shrimp?
12. What is the legal size of shrimp?
13. What is the number of people needed in shrimp processing?
14. What are the jobs in the shrimp business?
15. What equipment is used in catching and processing shrimp?
16. How long does the processing take?
17. Are pearls found in local oysters?
18. What kind of training is needed to work in commercial fishing?
19. What is the process for smoking fish?

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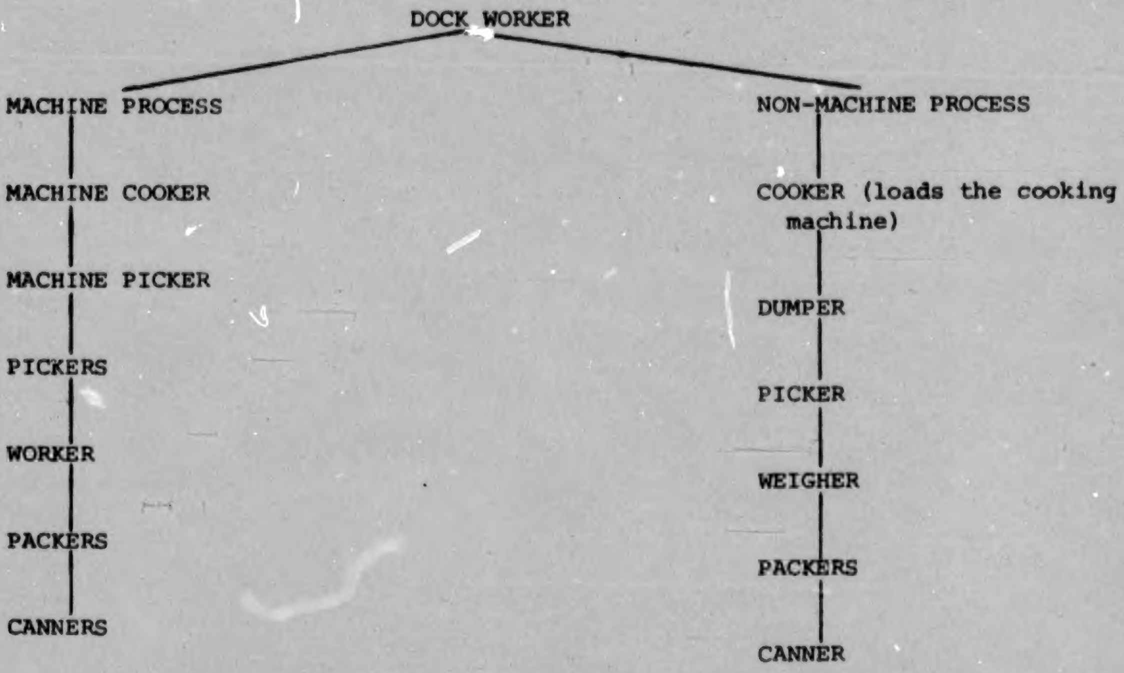
List #4

**SAMPLE**

MACHINE AND NON-MACHINE SHRIMP PROCESSING


DOCK WORKER
MACHINE PROCESS
MACHINE COOKER
MACHINE PICKER
PICKERS
WORKER
PACKERS
CANNERS
NON-MACHINE PROCESS
COOKER (loads the cooking machine)
DUMPER
PICKER
WEIGHER
PACKERS
CANNER

**SAMPLE**

## NON-MACHINE SHRIMP PROCESSING

1. A dock worker unloads shrimp boxes from the boat using a winch. He places 10 of these boxes on a skip.

2. A dock worker uses a hyster to lift the skip and carry it into the plant. He weighs the boxes of shrimp and subtracts the weight on the boxes and skip to get the weight of the shrimp which he enters on the tally sheet.

3. The worker puts crushed ice on top of each box and uses the hyster to move the loaded skip into the cold room until processing.

4. The worker uses the hyster to take the skip loaded with shrimp from the cold room to the shrimp cooker and dumps the shrimp onto the dumping rack.

5. The cooker loads the shrimp into wire baskets holding about 25 pounds of shrimp and places these baskets on the conveyor belt leading into the cooker. They travel through the cooker for about three minutes and then through the spray cooling tanks which spray the shrimp with cold fresh water to stop the cooling process and cool the meat.

6. The dumper takes the baskets, as they come out of the spray cooling tanks, into the pickers and dumps the baskets of shrimp onto the picking tables. He then returns the basket to the cooker.

7. The pickers use a plastic scoop to scoop some shrimp in front of them and spread them out to cool. They grasp the shrimp behind the head with their thumb and forefinger placing the head in the palm of their hand. Using the other hand they grab the shell portion of the body and pull it free from the meat dropping the shell to the table or the floor. They then squeeze the head portion of the shrimp with the thumb and forefinger to release the meat into their right hand and discard the head and shell. During the actual picking, the picker's eyes are looking at the next shrimp that they are to pick up. They then repeat the process with several more shrimp until they have a full hand of meat which they will then deposit in a cullender.

8. The picker will either take the cullender to the weigher or the weigher will come around and pick up the container and take it to be weighed. The weight and the picker's number are recorded on a tally sheet.

9. When the cullender is full, a worker carries it into the packing room where it is dipped in brine for salting and dumped onto a packing table.

10. The packers remove any shell left on the shrimp meat and place the meat in cans. When the cans are full, they are shoved to one end of the table.

11. The canner weighs the cans and adds or takes out shrimp until the can weighs 5 pounds. He then places the can in the sealing machine, places a lid on top, latches the door and activates the machine which automatically vacuum seals the can.

12. The cans are then placed in boxes on a skip and taken to the freezer or to

the loading area where they will be loaded on a truck for shipment to markets for retail sales.

## Evaluation Report

Unit F #6, Coos County Careers
Career Education Consultant: Dr. Ronald Olsen
Grade 8

This was a combination of job listings and previous units. Changes suggested previously should be incorporated in this one. In addition, in the vocabulary section at least three terms should be included: private businessman, civil service employer, and corporation. These forms of employers have not been covered previously.

### I. Job Descriptions

There are some pretty good activities and enrichment materials in this area.

### II. Economics and Ecology

The economics and ecology sections contain no activities presently. It may be interesting to compare the jobs in the fishing industry and ecology with those in the lumbering industry. The problems of each should have been discussed previously and how they are related. In the economics section there should be, likewise, a contrast with key occupations in logging and fishing in terms of wages, employment outlook, home life, civic responsibilities, avocational interests, and the ease of entry in the occupation. Some discussion should be given to why the variance in wages between logging and fishing industries. The idea being that there is a wider variation in the fishing then there is in the logging, primarily because the logging industry is paid on the hourly wage but relatively high wage. Where those in fishing are for the most part dependent upon what they can produce and, therefore, there is a wider variation in the wages.

Conclusion: This unit could be used in its present form but I feel that job descriptions should be included and some thought given to including sections in ecology and economics.

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## Evaluation Report

Unit F #6, Coos County Careers
Language Arts Consultant: Dr. Fred Packer
Grade 8

I. Validity - Appropriateness of concepts and development:

Concepts: Unit F-6 on careers states concepts to be developed with eighth grade students. As stated, these seem to be within the capabilities of most eighth graders of average intelligence and background.

Concept 5, which refers to vocabulary, should list the vocabulary or make a note that they are listed in another section.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average eighth graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

Activities for Concepts 1 through 4 seem reasonably appropriate. The activities for the development of vocabulary (Concept 5) are last in chronological order. It would seem that the vocabulary would be essential to the development of the first four concepts, and consequently the vocabulary activities should be first or incorporated within those for the other concepts.

III. Conclusion - In general, the unit is rich in terms, definitions, and information as they relate to careers.

It would seem that for this unit it would be essential that there be many experiences such as job interviews, work experiences, and guidance counseling sessions.

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# UNIT DO #1 - SPECIAL CROPS

## GRADE 3

# UNIT DESCRIPTION

## Unit DO #1 - Special Crops

This unit is the first in a series of six instructional units dealing in Diversified Occupations. The unit is designed for grade 3, and the recommended application generally involves thirty minutes of classroom time per day over a two week period. The unit allows provisions for field trips, various instructional media (16MM sound films and pamphlets), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 23 vocabulary words pertinent to 19 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Cranberries
  1. Key Occupations
    a. Grower
    b. Planter
    c. Weeder
    d. Harvester
    e. Processing Plant worker
  2. Terminology relating to cranberry culture
  3. Environmental and economic factors which involve cranberry growth

B. Myrtlewood
  1. Key Occupations
    a. Gypo logger
    b. Sawyer
    c. Turning lathe operator
    d. Lacquer Sprayer
    e. Buffer
    f. Sales person
  2. Vocabulary relating to myrtlewood manufacture
  3. Environmental and economic factors involved in the myrtlewood industry

C. Christmas tree plantation
  1. Key Occupations
    a. Tractor and bulldozer operator
    b. Planter
    c. Shearer
    d. Pruner
    e. Cutters
    f. Grader
  2. Vocabulary relating to Christmas tree production
  3. Environmental and economic factors involved in Christmas tree production

# Evaluation Results

DO #1 Special Crops Grade 3

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer was quite explicit in explaining that the activities failed to support the goals and objectives and were not appropriate to the children. She listed (please refer to her report) activities which failed and which failed to correlate with objectives.

Instructional alternatives were minimal, which decreased in their flexibility.

The Teacher Reviewer's most noted comment was in regard to enthusiasm evoked by the children; there was no enthusiasm.

She concluded by stating that she could not recommend this unit. (It should be noted that the Teacher Reviewer also reviewed L #1, Logging, with entirely different results.)

## II. Career Education Consultant

It can easily be stated that the Career Education Consultant considered this unit a failure in all three areas of concern, and he strongly recommended that this unit be totally revised before presentation to a class.

## III. Language Arts Consultant

In summary, the Language Arts Consultant stated that this unit was lacking in both quantity and quality.

It is interesting to note that the Language Arts Consultant stated that the verbal concepts and vocabulary were within the grasp of third graders.

## IV. Conclusion and Recommendations

The Project Coordinator strongly recommends that this unit be entirely rewritten with close attention payed to comments made by the Career Education Consultant.

## Instructional Unit Evaluation Report

**Project COULD:**
**Unit DO #1:** Special Crops
**Teacher Reviewer:** Deanna Franson
Milner Crest School
School District #9

**Grade:** 3

Project COULD Unit DO #1--Special Crops was presented to third graders in Room 9 at Milner Crest School, District 9, during the week of March 13-17.

At grade three level, the existing curriculum includes the study of the basic needs of food, clothing and shelter. Although the special crops unit does not fit easily into this curriculum, the basic idea of the unit would make a good special interest--supplementary unit to develop awareness of additional careers in this area.

The teaching of any instructional unit begins with teacher planning--using the unit as a guide to adapt lessons to a particular classroom situation. The special crops unit DO #1 has numerous discrepancies and problems which created difficulty in planning interesting and worthwhile lessons to teach the unit.

Following are the major problems and discrepancies noted in this unit. Additional comments may be found written into the printed unit.

I. Concept and behavioral objective #1

The concept to be developed is that "several crops not found in abundance elsewhere contribute to the total economy of Coos County;" but, the objective states that "the children should be able to name the several special crops of Coos County and explain the annual cycle of each." The concept to be developed is the relationship of special crops to the Total economy--yet the objective expects the child to explain the annual cycle. The objective should state that the child should name the special crops and tell how each affects or contributes to the total economy. There should be more stress on the items produced and their by-products (and how they affect the economy) than on the annual cycle of each crop.

II. Behavioral objective #2

"Children should demonstrate the correct use of the vocabulary words learned in the unit in both writing and speaking." This objective should be more specific by stating how the children should demonstrate the correct use of the vocabulary. (Comment opposite p. 5)

III. Behavioral objective #3

This objective is contradictory to concept #3. The concept states that "within each crop area there are several occupations...." but, the

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behavioral objective is directed toward myrtlewood, and includes a definite statement that "there are no specific jobs in the other two crops." Also, if there are no specific jobs in the cranberry and Christmas tree crops, why are key occupations for each listed in the vocabulary section?

IV. Activity 1-A

A weak opening activity. I found it difficult to establish a relationship between the holiday season and myrtlewood gifts. Also, the supplemental opener could be better utilized as an enrichment activity.

V. Activity 1-B

This activity does not support behavioral objective #1. It would make an interesting bulletin board to illustrate cranberry products.

VI. Activity 3-A

This is basically a good activity as third graders need experience in simple research. However, the objective is that children should be able to explain the several processes of the myrtlewood industry. Therefore, questions related to cranberries and Christmas trees are unnecessary to develop the objective.

VII. Activity 2-A

This could be a good activity. But, why should several children share a notebook dictionary? At this age, children are proud to take projects home to share with their families. I would suggest that each child have a dictionary of his own so that he may have it to keep at the end of the unit.

VIII. Activity 4-A

A good idea, but geared to faster groups to achieve accuracy and understanding.

IX. Activity 1-D

This supports concept #1, but not behavioral objective #1 (due to lack of relationship between concept #1 and objective #1). Also, why should the activity be concerned with only cranberries. Including myrtlewood and Christmas trees in the graph would make the activity more relevant to the concept.

X. Activity 1-E

This is an excellent activity. But, shouldn't it be coded to support behavioral objective #3--not #1?

XI. Activity 3-C

"Learn to identify from pictures the different trees that are grown for Christmas trees." How does this activity support objective #3--or any objective stated in this unit?

XII. Activity 1-F

A good resource person to help develop understanding of the concepts. But so much emphasis on identification of types of Christmas trees (activities 3-C and 1-F) is unnecessary when identification of types of trees is not among the behavioral objectives.

XIII. Activity 1-G

This activity does not support behavioral objective #1. It could be used as an enrichment activity.

XIX. Activity 3-D

In what way can this be considered an activity--and especially an activity to support behavioral objective #3?

The problems noted above and the comments written in the printed unit indicate that this unit (at its present stage of planning) lacks adequate behavioral objectives and suggested activities to provide teachability. I recommend that the basic concepts and behavioral objectives be rewritten so that they are clearly stated--and related. This would provide the foundation necessary for planning relevant learning activities that would develop understanding of the stated concepts.

As a teacher-reviewer, I was anxious to present this unit to my class. Six months ago we had worked with Unit L #1--with fantastic enthusiasm and success. The students had been eager to become involved in the logging unit. As their teacher, I had been thrilled with their understanding of the concepts and their ability to meet the expectations of the clearly stated behavioral objectives. Parents were also amazed when their children came home and discussed logging with them--in detail, using technical terms correctly.

Parents and children are still discussing logging. But the only feedback on the recent special crops unit is, "We went to the myrtlewood shop." When evaluating student interest and involvement created by this unit, that statement speaks for itself.

I cannot recommend inclusion of Project COULD Unit DO #1--Special Crops in the existing curriculum.

## Evaluation Report

Unit DO #1, Special Crops
Career Education Consultant: Dr. Ronald Olsen
Grade 3

This unit should be redone. For the most part it misses the desired goals in the career areas.

### I. Job Descriptions

I would be interested in having you take a look at dollar volume generated and number of people employed in collecting up brush and ferns and bark as opposed to the dollars generated to the people employed in Christmas trees and cranberries. You may want to include brush and ferns as one of the occupational areas rather than Christmas trees or cranberries. Another point that should be brought out is that most of the jobs in myrtlewood factories are held by women.

### II. Occupational Interrelationships

No occupational interrelationships were brought out.

### III. Environment and Economics

There was little in environment. There was very little in economics. I think that in the environmental and economics sections we ought to take a life slice of an individual that works in cranberries and in Christmas trees. We could take a look at what his home life looks like in the spring, the fall, summer and winter. The jobs that are involved in these two categories during these seasons. We ought to take a look at the dollars invested and the length of time it takes to get a return on the investment. The government control--I understand that the creation of cranberry bogs is controlled by the U. S. government, as well as by economics.

You should bring out the fact that cranberries and Christmas trees are just part-time work. Most of the people involved in these industries do it on a extra money basis. Whereas the jobs in myrtlewood are usually full-time. They are necessarily seasonal. I think it would be a good idea to take a good look at the extent to which products produced in a myrtlewood factory are sent nationwide. Their mail order business, the creation of materials that go all year round, and what do they do with them in the off-seasons? What effect does this have upon tourist season, Christmas, etc?

Conclusion: In conclusion, right now this unit fails to bring out any activities or anything to do with the key occupations. Environment and economics, for each of the three sections covered, tended to be done in isolation. I think that many comparisons can be drawn. This unit right now is made to be used during the Christmas season. I think that an alternate approach that would make it possible to use this unit during another time, early fall or spring, would make it a great deal stronger. I believe by taking a look at the people involved and their activities in these industries during the various seasons of the year would help to make this unit a more usable unit during the school year. I also feel careful consideration ought to be given to brush and fern production. I am told that evergreens on the corner a block away from our I.E.D. office does about $150,000.00 worth of fern and brush business per year.

## Evaluation Report

Unit DO #1, Special Crops
Language Arts Consultant: Dr. Fred Packer
Grade 3

### I. Validity - Appropriateness of concepts and development:

Concepts: Unit DO-1 on special crops states four concepts to be developed with third grade students. Except for Concept 1, they seem to be within the capabilities of most third graders of average intelligence and background.

In Concept 1, "the total economy of Coos County," would be too difficult a concept for third graders to grasp.

In each of the concepts, the specific items should be listed, i.e., special crops, terms, occupations, and environmental factors.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average third graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

### II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

1. Activities for Concept 1 seem to be quite adequate for acquainting the students to the nature of some of the special crops in Coos County. Only one of the activities deals with the "economy", and that one is 1-D which is recommended for the FAST group of students, not all of them.

2. Only two activities that mention vocabulary, and neither of them gives adequate direction for vocabulary development.

3. The activities for Concept 3 do not even mention "occupations."

4. Activities for Concept 4 would give a fairly good introduction to the environmental factors.

III. Conclusion - In general, the unit is adequate in terms, definitions, and occupations for some of the special crops in Coos County--mainly cranberries, Christmas trees, and myrtlewood.

The activities for the development of the concepts and vocabulary are lacking in both quantity and quality.

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# UNIT DO #2 - DAIRYING

## GRADE 4

# UNIT DESCRIPTION

## Unit DO #2 - Dairying

This unit is the second in a series of six instructional units dealing with Diversified Occupations. The unit is designed for grade 4, and the recommended application generally involves thirty minutes of classroom time per day over a two week period. The unit allows provisions for field trips, various instructional media (16MM sound films and pamphlets), and classroom visitation by resource personnel from the occupations presented. At the option of the teacher, 41 vocabulary words pertinent to 24 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Dairy Production
    1. Job Opportunities
        a. The farm
            1) Farm owner
            2) Milker
            3) Calf program manager
            4) Cleaning program manager
            5) Feed program manager
        b. Dairy feed establishments
            1) Manufacturer
            2) Retail worker
        c. Farm equipment establishments
    2. Dairy terminology

B. Dairy Processes
    1. Job Opportunities
        a. Plant manager
        b. Plant foreman
        c. Secretary
        d. Bookkeeper
        e. Route salesmen
        f. Procurement driver
        g. Plant men
        h. Cheese worker
        i. Pure pak operator
        j. Cheese wrap girls
    2. Terminology of Processing

C. Dairy Environmental Factors
    1. Geographical
        a. Transportation
        b. Pasture
        c. Feed availability
    2. Ecology
        a. Disposal of wastes
        b. Rotation and recycling
            1) Spreader method
            2) Pipeline irrigation method
            3) Lagoon system method

    3. Environment Job Opportunities
        a. Dairy sanitation
        b. County extension agent
    4. Dairy council representative
    5. Environmental control representatives

D. Economics
    1. Factors affecting industry
        a. Type of cow
        b. Feed
        c. Health of animal
        d. Age of animal
    2. Factors affecting processing
        a. Mechanization
        b. Sanitation
        c. Distribution

# Evaluation Results

DO #2 Dairying Grade 4

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer felt that the activities were appropriate and adequate, but she recommended that the unit should be spread over a greater time span.

The Teacher Reviewer also commented on the instructional alternatives in that they allowed great flexibility.

In regard to enthusiasm the Teacher Reviewer stated, "Activities suggested are appropriate and highly motivating to the students and generate a high degree of enthusiasm."

## II. Career Education Consultant

The Career Education Consultant made note of the fact that there are many jobs and job descriptions within this unit, but they lacked depth and comprehensiveness.

The unit was thorough in its treatment of key occupations in area of interrelationships, but that more emphasis was needed in the explanation of the process.

The weak points of the unit centered around the economic and environmental sections, but the Career Education Consultant suggested that the unit is teachable in its present condition.

## III. Language Arts Consultant

The verbal concepts and vocabulary were appropriate to the grade level, but the Language Arts Consultant felt that a number of activities might be too primary or otherwise less motivating than the more real activities.

## IV. Conclusion and Recommendations

This unit, with minor revisions already mentioned, could be used as is, but a revision of some of the activities might be necessary.

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# Instructional Unit Evaluation Report

Project COULD:
Unit DO #2: Dairying
Teacher Reviewer: Peggie L. Briggs
Ocean Crest Elementary
Bandon, Oregon

Grade: 4

1. If one visualizes a Language Arts block of time as consisting of approximately 50 minutes daily, then the suggested schedule in the Resource Unit appears to be somewhat inadequate, if more than a cursory involvement is to be achieved. It was found that more time was needed in the development of the essays and the necessary proofreading and re-writing skills. It was also found that the students became so involved in writing the poem that the free time period was also used in order to complete the 3 verses the students wanted for their poem and to perfect it to their satisfaction.

A multi-field-trip was planned for the first Monday to be used as a motivational device for the unit. It comprised a trip to a dairy farm in Myrtle Point and a trip to the Safeway Ice Cream Base Processing Plant in the same town. The entire trip consumed the time from 8:30 a.m. to about 2:00 in the afternoon necessitating the elimination of the regularly scheduled classes during that time, excepting the Language Arts block which was included in that time period. The balance of the afternoon was spent in evaluating the field trip and in accomplishing the scheduled activities for Monday, introducing the chart and doing the Spelling activities. Although this consumed the entire school day, every minute had intrinsic value especially as to generating enthusiasm for the balance of the unit.

Another extra period was used to show and discuss one of the films listed in the Resource section, which had a value in that it served as a review of the field trip and pointed out some areas we missed which were not available to us.

Another extra time period was used on Tuesday of the second week's schedule, when we utilized the morning in order to take a field trip to the local Coquille Valley Dairy Co-Op Cheese Plant in Bandon. This was deemed important by both Mr. Scheffler and me inasmuch as it preceded the Resource speaker, Mr. Elmer Morgan, State Sanitarian, who was scheduled to speak at our regular Language Arts period in the afternoon. The visit brought up the problem of waste disposal at the plant and provided a basis for the formulation of questions by the children to pose for Mr. Morgan. While this necessitated the elimination of morning classes, the time was well spent and again of intrinsic value in the development of the idea of multiple skills needed in any one aspect of the dairying industry.

In summarizing, it would appear that a more appropriate and realistic time period for this unit would be approximately three weeks. If field trips, resource speakers and parent resources are to be, and should be, included and full advantage taken through discussion and writings by the students and other activities developed, then the additional week would be a well spent and necessary adjunct.

2,3,4. This unit coordinates well with existing curricula, predominantly Reading, Spelling, Language, and Writing, but also it was found to inculcate some Math and Social Studies in reading and interpreting graphs and maps, and in contructing graphs, etc. In instigating and conducting an added activity of "Cheese Making in the Classroom" (See No. 9 for resource) some elements of measurement and time also were introduced. The subject of Dairying and Foods also touches the curriculum of Health. The materials and activities suggested are appropriate and highly motivating to the students and generate a high degree of enthusiasm. The level of difficulty appears to be universal. That is, there is sufficient challenge for the faster students to dig deeper and yet there is the opportunity for even the slowest to experience success feelings and pride in achievement.

This is a thoughtfully conceived career exploration program incorporated in the major aspects of the daily curricula and is a good vehicle by which children can sharpen their understandings and skills needed to make rewarding decisions later as to occupations. This reviewer agrees with Drs. Sylwester and Matthews, University of Oregon, when they state that by "emphasizing the career theme throughout the elementary years and adapting activities to fit the needs of the children, we are fostering maturing attitudes toward life and giving children the experiential tools with which to test, change, and perfect their abilities."

5. The concepts and behavioral objectives as outlines in the Resource Unit are easily attainable by the majority of abilities inherent in a heterogeneous classroom. For the students with learning disabilities, teacher guidance and/or peer help proves of value in aiding them to achieve and to develop a sense of self-worth. This reviewer found that all students were able to respond to the behavioral objectives on a level commensurate with their potential and feel adequate.

6,7. It is felt that there is no material in excess, rather that there is need for a little more time allotment to pursue the activities already incorporated into the unit.

There is more material necessary, however, if justice is to be done to a much needed career exploration experience. There is a lack of educational materials such as specialized materials representing career development approaches, multimedia career exploratory kits and, of course, formalized texts with a career-world base. There is even a dearth of material that can be collected and adapted to the pursuit of the dairying industry. Many of the pamphlets and booklets that this reviewer collected were from other rooms who had saved old out-of-print material from the Oregon Dairy Council, but which were of real value in the reading for points on the chart. Meanwhile, it is challenging to try to create one's own materials.

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8. The materials and activities presented in this unit are very high in motivational appeal and self-sustaining interest to the students at all levels of ability. It provides a practical use for many of the mechanics of the Language Arts curriculum and points out to the students why these types of things are included in their work. After completion of the unit, there are still requests for more things to do on the dairying unit. If the other units in the program were ready, this would be good motivation to proceed on to the other two areas.

9,10. This reviewer has no suggestions for alterations except that there is one media kit that was found that seemed to be particularly apropos following a trip to the cheese factory. It is a kit on "Cheese Making in the Classroom" put out by the Swiss Cheese Council, and costs $1.00. It is an activity kit and contains minute details and diagrams on procedure and includes the rennet starting tablet for the students to make a batch of a swiss-type cheese. Cheese making tools are either collected or they are shown how to make some simple tools which suffice. This takes a couple of hours the first day and then only a few minutes each day for the duration of the cheese making activity. It might well be incorporated into the unit, but would prolong the activities beyond the present two weeks plan. Extra time was also taken at the suggestion of the children that they try to write "Cinquains" on various dairying subjects. Previous experience with Cinquains was of help and the results were gratifying to them. This might also be an added activity, if considering extending the time beyond two weeks.

The strong point of this unit lies in the fact that it is not a "read-and-recite" type of learning, a factor that students with learning disabilities find is stultifying at the outset and which "turns off" many children of superior ability through sheer boredom. The activity-centered unit is of such high motivational appeal and generates such fun and excitement that the subject matter is carried along by its own impetus. The weak point lies in its dearth of career-oriented material already noted in numbers 6 and 7. Another weak point, perhaps, might lie in the time allotment for coverage of the multi-activities.

11,12,13. The unit organization is logical and sequential in the development of the concepts and behavioral objectives. It is easy to motivate and follow and was pure pleasure to teach. This reviewer approached the unit with a high degree of enthusiasm and this increased with further involvement in the succeeding activities. Perhaps one of the most outstanding aspects of the unit was the astonishing cooperation and involvement of the various resource persons encountered. Since it was impossible to visit a dairy farm at the 4:00 a.m. milking time in order for the children to see the cows milked, Mr. and Mrs. Seals of the Sun Valley Dairy had several cows from the early morning milking and had them ready in the milking parlor to demonstrate all aspects of the milking process. The children were able to watch the procedure of sanitizing the cows, milking them, and to see the milk go through the tubes into the strainer and then into the storage tank to watch it being stirred in order to keep the cream from separating. This was certainly more than one could reasonably have expected. Mrs. Seals also delivered milk to us at the Ice Cream plant and the Safeway Plant Manager furnished us with ice cream for our lunch. Mrs. Pam Rood as contact person for arrangements for these activities was most helpful and cooperative and made all the arrangements necessary for the trips and for judges for the essay contest, who were highly enthusiastic over the whole idea.

It is the reviewer's impression that this unit is of inestimable worth in helping to alert children to the possibilities in the world around them and in helping them to begin to think about "Who am I?"; "Where am I going?"; and "How am I going to get there?". These are intrinsic factors in any career orientation exploration.

## Evaluation Report

Unit DO #2, Dairy
Career Education Consultant: Dr. Ronald Olsen
Grade 4

This unit is for the most part in good shape and could be used as is. However, there are several areas that could be reworked in it.

### I. Job Descriptions

The number of jobs covered is great. However, the job descriptions tended to be brief to the point that if the individual wasn't acquainted with the dairying industry he would have trouble identifying the individuals. Expanded job descriptions should be provided with some information on the number employed, wages, hours worked, etc. Also aptitudes and interests.

### II. Occupational Interrelationships

The interrelationships were great. Probably the strongest point of this whole unit from my viewpoint. However, the job interrelationships were developed, I feel, to the point of exclusion of processes. Greater emphasis should be put on the processing of cheese and ice cream.

### III. Environment and Economics

These both tended to be weak. I think with a historical approach the environmental might be appropriate with milk production in 1930 as contrast to 1970. Differences of home life, differences in waste, and worries between then and now. I think an appropriate concept in the economics section might be one in terms of value added. You might take a look at the farmer. The cost of milk to him and his inputs in terms of dollar investment in cows, machinery, farm and feed, etc. The processor, the value that he adds and his inputs of transporting it, storing it, processing it, packaging it, and delivering it. Then of the value added to the retail outfits with his overhead, his workers, floor space, handling it, etc. So that we get a concept built in here that even though the farmer gets 10¢ a gallon, the processor gets 70¢ a gallon, and the store gets a dollar a gallon, that each of these prices are justified in terms of the effort put in. This could easily be charted with the inputs. Let the children work on this one a little bit. Bring in the one activity that is mentioned in terms of total economic impact of their industry on the county.

Conclusion: In conclusion, this unit could be used as is.

# Evaluation Report

Unit DO #2, Dairying
Language Arts Consultant: Dr. Fred Packer
Grade 4

## I. Validity - Appropriateness of concepts and development:

Concepts: Unit DO-2 on dairying states five concepts to be developed with fourth grade students. As stated, these seem to be within the capabilities of most fourth graders of average intelligence and background. However, Concept 5 may be too difficult.

In each of the concepts, the specific items should be listed, i.e., employment, terms, techniques, and environmental factors.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average fourth graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

## II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

The activities for vocabulary are presented at the beginning of the unit and at the start of each day's activities. This is sound practice for the development of vocabulary and also for the enhancement of concepts.

The use of resource speakers and field trips should provide for richer concept development than the usual classroom activities.

III. Conclusion - In general, the unit is rich in terms, definitions, and background information as they relate to dairying.

Some of the activities, such as "Clarabelle Cow," the poetry, and writing contest may be too primary or otherwise less motivating than the more real activities.

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## UNIT DO #3 - THE TRAVEL INDUSTRY

GRADE 5

## UNIT DESCRIPTION

Unit DO #3 - The Travel Industry

This unit is the third in a series of six instructional units dealing with Diversified Occupations. The unit is designed for grade 5, and the recommended application generally involves thirty minutes of classroom time per day over a three week period. The unit allows provisions for field trips, various instructional media (16MM sound films, audio tape recordings, transparencies, and pamphlets), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 45 vocabulary words pertinent to 34 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Parks, Beaches and Dunes
    1. Job Opportunities
        a. District Ranger
        b. Forester
        c. Resource Assistant
        d. Administrative Assistant
        e. Recreation Technician
        f. Recreation Guard
    2. Terminology

B. Sport Fishing
    1. Job Opportunities
        a. Operator
        b. Bait boy
        c. Shop boy
        d. Secretary, Bookkeeper
        e. Moorage or Marina man
        f. President
        g. Vice-President
    2. Terminology

C. Services: Hotel, Motel and Restaurant
    1. Job Opportunities: Hotel and Motel
        a. Managers
        b. Secretary, Receptionist
        c. Maid
        d. Janitor
    2. Job Opportunities: Restaurant
        a. Manager
        b. Head waiter or waitress
        c. Hostess
        d. Secretary, Bookkeeper
        e. Waitress
        f. Cocktail waitress
        g. Dishwasher
        h. Bus boy
        i. Sanitation worker
    3. Terminology

D. Airline, Busline and Travel Industry
  1. Job Opportunities: Airline
    a. Manager
    b. Agent
    c. Pilot
    d. Stewardess
  2. Job Opportunities: Busline
    a. Manager
    b. Agent
    c. Bus Driver
  3. Job Opportunities: Travel Agencies
    a. Manager
    b. Secretary, Bookkeeper
  4. Terminology

E. Environmental
  1. Geographic location
  2. Ecology
  3. Job Opportunities
    a. Environmental Control Representative
    b. Gold Coast Association

F. Economic Opportunities
  1. Monetary impact
  2. Support of Service

# Evaluation Results

DO #3 The Travel Industry Grade 5

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated this unit as excellent in regard to appropriateness of material to the children and this grade level: "The activities are planned to meet the goals and objectives in a very interesting and usable form."

The unit also rated high in instructional alternatives and their flexibility.

The Teacher Reviewer rated the enthusiasm as good but not as intensive as expected.

## II. Career Education Consultant

The Career Education Consultant suggested that this was perhaps the best unit he had reviewed. The unit was comprehensive in its identification of key occupations.

He suggested that although the unit was thorough in treatment of key occupations, further background material for teacher use might be included.

Occupational interrelationships were good. Both the environmental and economic sections were adequate but could tolerate minor revisions. The Career Education Consultant stated that the unit could be used in the classroom as it now exists.

## III. Language Arts Consultant

The verbal concepts and vocabulary appeared to be within the grasp of the average fifth grader.

The Language Arts Consultant suggested that this unit was on the verge of losing its effectiveness in regard to the development of language arts skills. He mentioned that the use of games in this unit was primarily for extrinsic reinforcement: "More activities are needed that would encourage the natural use of the vocabulary in the daily lives of the students."

## IV. Conclusion and Recommendations

When revising this unit in format, careful consideration of the consultants' reports should be taken. There will be no major revisions necessary in this unit.

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# Instructional Unit Evaluation Report

Project COULD:
Unit DO #3: Travel Industry Resource Unit
Teacher Reviewer: June C. Brown
Milner Crest Elementary
Coos Bay, Oregon
Grade: 5

Project COULD Unit DO #3 Travel Industry Resource Unit was presented to fifth graders in Room 5 at Milner Crest School, District 9, during the week of March 13 - 17.

Student interest was good, but not as intensive as for the Lumber Processing unit I had evaluated previously. All students were keen on the Dune Buggy race. Perhaps a week is too short a time to evaluate a unit such as this because there are so many activities and ideas involved that can't be touched or evaluated thoroughly.

The concepts, objectives, and activities presented in Unit DO #3 are appropriate to the abilities and understanding of this level. Of course, the individual teacher would adjust the approach and activities to fit the needs and abilities of his/or her class.

During the review of the unit, both what I taught and also the reading and studying of the other activities, it was evident that careful planning and selection had been done. Using COULD materials (if and when they are available) and teacher prepared materials, students will demonstrate the abilities listed in the behavioral objectives and objectives of language development.

The teachability of this unit is good. With all necessary material available (audio-visual aids, resource persons, etc.) this will be a very interesting and beneficial addition to the curriculum. The unit is well organized with activities to emphasize and support concepts and objectives.

The unit is written at a suitable level of difficulty. The students did not seem frustrated or unable to grasp the concept or ideas. The activities are well-planned for this level--being both a learning experience and fun. The activities are planned to meet the goals and objectives in a very interesting and usable form.

Provided the suggested audio-visual material and other resource material will be readily available to facilitate the teaching of the unit, I feel the material would be adequate. The three week suggested time would be adequate if the planned activity calendar was followed. This gives ample time to develop concepts and objectives.

The background information was helpful, but perhaps could contain more material. For myself, to evaluate students' understanding of the concepts, I would need more basic information on various aspects of the travel industry and job opportunities in each.

The strong points of this unit are in the extensive planning of the unit for the fifth grade. It was written at a level that is interesting and understandable to fifth graders. The suggested activities are interesting, varied, and actively involve students to develop a better understanding of the travel industry using acquired language skills to be able to communicate knowledgably in this area.

Another feature I especially consider a strong point is the format of the instructional packet. Having each section tabulated for easier use and quick reference is great for busy teachers. Also having concepts, objectives, activities, and resource material numbered so they parallel each other is a good idea also.

I would strongly recommend the inclusion of Project COULD units in the existing curriculum. Since the travel industry is of major importance in our county, children need to understand and have pride in a vocation indigenous to our area. An understanding of the concepts in this unit would encourage better communication between parent and child or between other adults and children of our community.

## Evaluation Report

Unit DO #3, Travel Industry
Career Education Consultant: Dr. Ronald Olsen
Grade 5

This unit had good continuity and is in good shape as is.

### I. Job Descriptions

There was good coverage. One area that you may want to include would be your chefs or other kitchen help. These were not listed that I could find. Also you may want to expand the job descriptions so that instructors would have a better understanding of the various occupations. Those job descriptions should include aptitude and interests, availability of work, work times, and wages paid.

### II. Occupational Interrelationships

The interrelationships were good. No further work needs to be done in this area.

### III. Environmental Factors

The environmental section was good. However, I feel that it is rather narrow. One activity that might be done, this would be a role playing situation, is a research situation where students contrast the tourist industry in 1930 as opposed to 1970. Have them make a list of all of the changes that have come about in the last forty years here in the Bay Area. The effect that these changes have had on the area would be enlightening. In terms of better transportation, more people and what the people have done to the area. Another point of consideration might be a discussion of forest lands set aside as wilderness areas as opposed to those that have multipurpose areas.

### IV. Economic Factors

In the economics section there needs to be some work done in terms of a macro-view of the importance of travel industry upon the economy of Coos County. There were several cute exercises dealing with how the industry affects individuals, but as a county I think that the point needs to be made that travel industry appears to be one that will continue to grow and one that will employ an increasing number of people and bring in increasing dollars to this county.

Conclusion: In conclusion, the unit is in good shape generally and could be used as is.

## Evaluation Report

Unit DO #3, Travel
Language Arts Consultant: Dr. Fred Packer
Grade 5

I. Validity - Appropriateness of concepts and development:

Concepts: Unit DO-3 on Travel states five concepts to be developed with fifth grade students. As stated, these seem to be within the capabilities of most fifth graders of average intelligence and background.

In each of the concepts, the specific items should be listed, i.e., employment opportunities, terms, recreational activities, and environmental activities.

Vocabulary: The amount and difficulty of terms seem to be within the capabilities of average fifth graders. The critical test will lie with the individual teacher and her ability to deal effectively with vocabulary development.

II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

In this unit there are a number of games described in the activities. Although the use of games can be an effective instructional technique, it can be used to excess. In this situation the games are adequate for reinforcement, but more emphasis should be placed on real experiences.

The use of resource speakers and field trips should provide for richer concept development than the usual classroom activities.

III. Conclusion - In general, the unit is rich in terms, definitions, and background information as they relate to tourism.

It seems that the main emphasis in the units should be on occupations and vocabulary. These have received good attention in all the activities. More activities are needed that would encourage the natural use of the vocabulary in the daily lives of the students. Possibly a note to the teacher concerning this goal would be worthwhile.

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# UNIT DO #4 - MARKETING

## GRADE 6

# UNIT DESCRIPTION

## Unit DO #4 - Marketing

This unit is the fourth in a series of six instructional units dealing with Diversified Occupations. The unit is designed for grade 6, and the recommended application generally involves thirty minutes of classroom time per day over a four week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, books, pamphlets, and records), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 69 vocabulary words pertinent to 21 key occupations are covered in the "activities" section of the unit. The subject matter is as follows:

A. Occupations in the retail field
    1. Retail businesses that first appear in the smallest community

B. Retail business terminology; retail marketing and consumer

C. Retail marketing reflects the economic health in an area

D. Responsibilities of consumers and retailers

# Evaluation Results

DO #4 Marketing Grade 6

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and address specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated the unit as adequate in regard to the level of difficulty, but he cited examples of his difficulties in certain areas: i.e., vocabulary.

The Teacher Reviewer did not specifically state anything concerning the flexibility of the instructional alternatives. However, he said that an hour or more per day was needed in the administration of this unit as it now exists. He suggested that the unit be revised to cut down this time space.

There was nothing specifically stated about the students' enthusiasm.

## II. Career Education Consultant

The Career Education Consultant strongly suggested total revision of this unit from top to bottom: "This particular unit in my estimation covers too much, too fast, and not enough student involvement. I feel that generally the unit goes into too much depth for their age level. It has a math rather than a language emphasis."

## III. Language Arts Consultant

The Language Arts Consultant felt that the verbal concepts and vocabulary were appropriate to the grade level, but the vocabulary list was incomplete and in need of reorganization.

Although the activities were excellent, they were poorly organized and inconsistent. The goals and objectives were unrelated and inappropriate.

## IV. Conclusion and Recommendations

This unit has received poor evaluation from all reviewers and the Project Coordinator. The unit is in need of total revision. Each of the evaluators should be examined before and during revision.

# Instructional Unit Evaluation Report

**Project COULD:**
**Unit DO #4: Marketing**
**Teacher Reviewer:** Tom Mahugh
Coos River Elementary Learning Center
**Grade: 6**

The following is an evaluation of the Diversified Occupations' Unit on Marketing, prepared for the sixth grade level by Career Orientation Utilizing Language Development (Project COULD). The unit reviewing contract was the period from February 14 to February 25. The unit was used with the sixth year class of 16 students at Coos River Elementary Learning Center. The class was involved with the unit for six school days, approximately one hour per day with the exception of an all day field trip on February 21.

Provided an hour per day, most classes could complete the unit in the expected four weeks time. This does not include the extra time needed for any necessary field trips and interviews. It is doubtful, however, if an hour per day would be readily available in most schools, if all the "required" subjects were taught.

The material fits satisfactorily with existing curriculum, due to the fact that Coos River has had previous teaching of career awareness to the students. In the area of math, the unit exceeded the ability of the majority of the students. The concept of per cent was not easy for the students to grasp, but was necessary to discuss in relation to most areas of this marketing unit. The level of difficulty of the overall unit is within the grasp of most sixth graders.

The ability of the unit to meet its overall goals and objectives is difficult to discuss, because the reviewer feels the behavioral objectives stated are not closely coordinated with the concepts given. For example, the reviewer doubts the ability of behavioral objective number 4, (Using the advertising slogan, "Why Not Have What You've Always Wanted?" demonstrate the fallacy of this kind of thinking on the part of the consumer --- on the part of the retailers.) to test the students' learning of concept number 4, (The retail market and the consumer share a responsibility toward one another. If each is to be successful, he must treat the other with respect and honesty).

The objectives given should not be termed "behavioral" because they do not clearly define the behavior the student should have upon completion of the unit. A definite criteria for measuring achievement is not given.

In the area of language development the unit appears to be strong. An adequate list of vocabulary is provided, however, the activities provided for vocabulary development are mainly of a drill nature. Little or nothing is provided in the way of an activity to reinforce the vocabulary in a meaningful context.

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Students are acquainted with a large number of career possibilities. Adequate material is provided on the economic relationships and occupational interrelationships. The reviewer feels that an inadequate list of career concepts to be developed is given. An example of a further concept may be as follows:

> "Retail marketing is dependent upon the marketer's ability to convince the consumer he needs to buy the marketer's products; i.e., advertising."

The Unit characteristics include its flexibility of application. It is possible to pick and choose the material quite readily without loss of its effectiveness. The unit's sequential integration is adequate, but the activities could be rearranged ennumerable ways without loss of the unit's effectiveness.

One serious lack is found in activities to support concept number 3:

> "Retail marketing does not produce the economy; it is rather a reflection of it. Environmental and economic problems experienced by the major 'producing' industries are reflected in the economic health of the market field and its service businesses."

The two activities given, although not tried by the reviewer, seemed to be weak in meeting the concept and its behavioral objectives.

The students' attitude toward the material was not one of great excitement at first, because the idea of marketing seemed to be dry to them. However, as the discussion and activities turned to field trips, the interest heightened greatly. On two separate days, the class visited the following:

ONC Freight
McKay's Market (on Kruse)
Hosking-Pynch Enco Station
Penney's Department Store
The World Newspaper
Taco Time (for lunch)

Every business was interested in the students' questions and did exceptionally well explaining its phase of the marketing community. More highly motivational lead-in activities may be needed.

The Unit's strong points include its basic philosophy: that careers can and should be taught at the elementary level. Students are interested because they are able to see a long range reason for doing much of the work school requires. The background material provided at the end of the unit is very valuable in planning field trips, because of the detailed information given. However, upon reading the background material, the reviewer feels sorry for the writer because he seems to have been greatly abused by his consumers at some point. He seems to put the burden on the consumer to make retail businesses succeed.

Overall organization and ease in using the booklet are strong points of the unit. The main weak points are lack of clearly stated concepts and behavioral objectives.

The reviewer's overall impression of the unit is favorable, and he is looking forward to seeing the revised finished product.

## Evaluation Report

Unit DO #4, Marketing
Career Education Consultant: Dr. Ronald Olsen
Grade 6

This particular unit in my estimation covers too much, too fast, and not enough student involvement. It has a math rather than a language emphasis. I feel that generally the unit goes into too much depth for this age level and this time in the marketing area. Rather than go through the four different areas, might I suggest a way of restructuring this unit that I feel would be appropriate. In the first place, I would suggest that the unit be built around the creation of a student business. They would be organized and operate and be dissolved in a four week period. Funds for the store would be generated through sale of stock to students and teachers. Students would determine the products to be sold, mark up and display those products. Liquidation of merchandise would take place at the end of the four week period. During that four week time students would be introduced to a production-retail operation. I would suggest that you change the myrtlewood factory that was in DO Unit #1 to this unit, this would cover your production-retail operation. Let them explain how they determine mark ups, what products to produce, etc. The financing for retail firms, the information used in this unit #4 on banks could be used in creation of this new unit. Transportation could be brought in. Through this means students would get a view of relatively simple marketing chain of distribution from a producer, wholesaler, retailer, transportation firms and financing. These same things could be visualized and realized within the student operated store. A great deal of effort has gone into this particular unit; however, in its present form it is just too heavy for sixth graders and without enough directions for students or teachers.

## Evaluation Report

Unit DO #4, Marketing
Language Arts Consultant: Dr. Thomas J. Walker
Grade 6

I. Validity - Appropriateness of concepts and language development:

Concepts: Unit DO-4 is a unit on marketing in diversified occupations. Concepts intended for achievement by the students are stated as five goals with corresponding performance objectives. The goals and objectives seem to be within the capabilities of sixth grade students. Goal number two should be worded more precisely. Behavioral objective number two related to that goal seems weak. Behavioral objective number two seems to place more emphasis on correct contruction of a crossword puzzle than on selected vocabulary words and key occupational titles.

Vocabulary: Although a unique set of terms and list of key occupations are referred to in the goals, no vocabulary list of such terms and occupations was found in the unit.

II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

A variety of excellent activities are suggested. However, they need to be reorganized into a logical progression toward the stated goals and objectives. Activity number 1-E should be identified as the evaluative activity for objective number one, as should the evaluative activities for each of the other objectives. As previously stated, a vocabulary list of unique terms and occupational titles should be identified in the unit.

III. Conclusion - In general, the materials in the unit seems to be appropriate for sixth grade level, however, without the vocabulary list it is incomplete and in need of reorganization.

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# UNIT DO #5 - ECOLOGY

GRADE 7

# UNIT DESCRIPTION

Unit DO #5 - Ecology

This unit is the fifth in a series of six instructional units dealing with Diversified Occupations. The unit is designed for grade 7, and the recommended application generally involves thirty minutes of classroom time over a two week period. The unit allows provisions for field trips, various instructional media (16MM sound films and audio tape recordings), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, 38 vocabulary words pertinent to 34 key occupations are covered in the "activities" section of this unit. The subject matter is as follows:

A. Conservation
  1. Job Opportunities
    a. Forester
    b. Inspector
    c. Soil conservationist
    d. Environmental Quality Technicians
    e. Oceanographer
    f. Water shed Technician
    g. Geologist
    h. Conservation aide
    i. Landscape architect
    j. County Agent
  2. Terminology

B. Protection
  1. Job Opportunities
    a. District Warden
    b. Field Warden
    c. Dispatcher
    d. Service and farm forester
    e. Conservation specialist
    f. Forest look-out
    g. Crew men
    h. County health worker
    i. Pesticide control specialist
    j. Fertilizer specialist
    k. Meteorologist
    l. Weatherman
    m. Wildlife specialist
    n. Fish harvest specialist
  2. Terminology

C. Sanitation
  1. Job Opportunities
    a. Sewage treatment specialist
    b. Lab technician
    c. Water treatment operator
    d. Chemical engineer

    - e. Civil engineer
    - f. Agricultural engineer
    - g. Draftsman
    - h. Surveyor
  - 2. Terminology

- D. Ecological awareness
  - 1. Job Opportunities
    - a. Educator
    - b. Environmental Quality Control
    - c. Community action groups

- E. Economic impact

# Evaluation Results

DO #5 Ecology Grade 7

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and addressing specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated the unit as slightly high in regard to level of difficulty; the students confirmed the opinion of the Teacher Reviewer.

Flexibility of instructional alternatives was rated as adequate.

The Teacher Reviewer rated the students' enthusiasm as quite high.

## II. Career Education Consultant

The Career Education Consultant was impressed with the scope of job descriptions, but the job descriptions and definitions were brief and inadequate.

The activities did not adequately deal with the activities.

The occupational interrelationships section was rated as high, but the Career Education Consultant suggested revision for both the environmental and economic sections.

## III. Language Arts Consultant

The Language Arts Consultant felt that the verbal concepts and vocabulary were too broad and too difficult for seventh graders.

The activities adequately incorporated language skills. The Language Arts Consultant recommended reorganization in the activities section.

## IV. Conclusion and Recommendations

There was general consensus among the evaluations that the material should be revised. It is recommended that the unit be rewritten with due regard to the evaluation reports of the three evaluators.

# Instructional Unit Evaluation Report

Project COULD
Unit DO #5: Ecology
Teacher Reviewer: Laura Jean Sherrill
Coquille Junior High School
School District #8
Grade: 7

As teacher reviewer for Project COULD, I utilized the Ecology unit for six days with three different classes. The unit fits in well with the existing seventh grade curriculum for social studies, which deals with the basic problems of mankind (food, clothing, shelter, etc.). The level of difficulty in the existing unit is slightly high, both from my own judgement and that of the students.

I feel that the unit can meet overall goals and objectives, although limited presentation time did not enable me to cover all of the goals and objectives. Those easiest to meet were the vocabulary enrichment and career possibilities. The only goals and objectives that seem harder to reach seemed to be those listed under unit characteristics. It is my opinion that the unit is flexible but not complete.

I don't feel that there was any material in excess, although written work seemed to expect a little too much for my particular seventh grade class, since we are a more discussion-oriented class. The definitions were a little too technical for the students to grasp on their own. I found that quite a bit of explaining was necessary. We were unfortunate to have no parents involved in these occupations, so the unfamiliarity of the vocabulary may have contributed to the difficulty. The suggestions at the beginning of the unit were good for discussion openers. We talked about jobs; what kinds were available, how much training was necessary, and what to look for in a job. We played several word games with the vocabulary and had some quizzes. We used three commercially prepared films and had one speaker from the resource list. The resource people are usually quite busy and hard to get hold of. I would find it much more convenient to have tapes made of several interviews. Along this same line, I found that my background on the subject of Coos County careers was lacking. The material in the back of the booklet was not really sufficient. Library material did not really deal with this particular area of the country. I often clipped news articles from the paper dealing with ecology and brought them to class for discussion.

The student interest level was quite high. Many students have definitely considered careers dealing with ecology and several did some extra research on their own.

I think I have suggested several alterations; taping interviews, providing more background and discussion material and adjusting vocabulary and definitions for seventh grade comprehension. Other than these, I feel the unit is complete, yet flexible.

The strong points seem to be the prepared media and resource people, the vocabulary (with alterations) and most of the activities. The unit is organized well, for a flexible teacher. It really isn't a ready-made unit. I don't feel that it would be teachable if one followed it word for word. I was pleased with the unit, but my original spirit was somewhat dampened as the students had to struggle with vocabulary. It is hard to say how I would have judged the unit if we had reviewed the entire thing. I picked sections that I felt would benefit my class in the short period of time we had. I feel that it is a worthwhile unit and that my students did benefit from their exposure to it.

## Evaluation Report

Unit DO #5, Ecology
Career Education Consultant: Dr. Ronald Olsen
Grade 7

### I. Job Descriptions

The number of jobs described in this unit was adequate but the job descriptions themselves tended to be brief.

### II. Occupational Interrelationships

Job interrelationships were great. However, I failed to find activities that brought about an understanding of what the people in the various occupations listed did. There needs to be some work done to help bring out various tasks performed by the people involved in this unit.

### III. Environmental and Economic Factors

The environmental section was good, however, I think that a specific example of what can be done and carried on over into the economics section would be appropriate. Last summer the Neighborhood Youth Corp worked with the Coos Bay City in a sewer disposal study. This has been documented and put on films and it shows what a group of youths, high school age, have done and are doing in the summer in terms of changing sewer and waste water disposal. This is an excellent film and should be available for use. A special copy could probably be acquired to be used in this project. This should be carried on over into the economics section. We have established that there are groups working in an environmental clean-up, what does this cost you and I for sewerage treatment? Just about every community in the county has built a sewerage treatment plant or is in the process of acquiring funds to do so. Maybe a field trip or activity to go and view the sewerage treatment would be appropriate. The dollars that it cost for this bring out the questions of whether it is worth it, as well as the water disposal-water treatment. I think that this one activity, where we focus on what is really being done by people to clean-up the environment and the dollar cost to do so, would be an outstanding activity.

Conclusion: In conclusion, I feel it needs some work done in terms of describing what the people in the key occupations do and some specific examples of environmental and economic impact of groups in cleaning up our environment. These activities should be included before this unit is used in the classroom.

# Evaluation Report

Unit DO #5, Ecology
Language Arts Consultant: Dr. Thomas J. Walker
Grade 7

## I. Validity - Appropriateness of concepts and language development:

Concepts: The concepts for the unit DO-5, Ecology, are stated as goals. Five goals are listed, each referring to "ecological protection." The evaluator suggests that perhaps the unit should be titled "Ecological Protection." Five behavioral objectives for students are listed to correspond with the five stated goals. Goal #5 and behavioral objective #5 would be more closely aligned if the following change were made in the goal: strike out the phrase "is an important part of" and insert the word "effects." Goal #5 would then read: "To make the students aware that ecological protection in Coos County effects the economy." The stated goals and objectives seem to be within the capabilities of most seventh grade students.

Vocabulary: The vocabulary list consists of thirty-eight vocabulary words and the titles of thirty-four key occupations. Two occupational titles are listed in the vocabulary words. They are "biologist" and "technician." The vocabulary list has many words in it that must be classified difficult to spell. Few seventh graders will master the entire list in spelling. However, the words are important to the topic of ecology and should become a part of the speaking vocabulary of the students. It is doubtful if fifty percent of the students will be able to accomplish behavioral objective two without considerable amount of effort in spelling.

## II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

The activities seem to be appropriate for seventh grade students. However, in relation to the concepts to be developed some re-organization would be helpful. Activity 2-A and 2-B are located on page 20, while 2-C and 2-D are located on page 26. Evaluative activities related to the five behavioral objectives should be clearly identified. Background information for the teacher's use is skimpy.

III. Conclusion - (1) Re-phrase goal #5, (2) consider an alternative to behavioral objective #2, (3) rearrange the activities into numerical order, (4) clearly identify evaluated activities, (5) attempt to supply background information for teachers.

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# UNIT DO #6 - COOS COUNTY CAREERS

## GRADE 8

# UNIT DESCRIPTION

## Unit DO #6 - Coos County Careers

This unit is the sixth in a series of six instructional units dealing with Diversified Occupations. The unit is designed for grade 7, and the recommended application generally involves thirty minutes of classroom time per day over a four week period. The unit allows provisions for field trips, various instructional media (16MM sound films, sound filmstrips, audio tape recordings, pamphlets, and records), and classroom visitations by resource personnel from the occupations presented. At the option of the teacher, all of the vocabulary words pertinent to all diversified occupations are covered in the "activities" section of this unit. The subject matter is as follows:

A. Aptitude and interest inventory testing
   1. GATBY - aptitude test
   2. Interest inventory

B. Special crops
   1. Occupations
   2. Vocabulary

C. Dairying
   1. Occupations
   2. Vocabulary

D. Travel industry
   1. Occupations
   2. Vocabulary

E. Marketing
   1. Occupations
   2. Vocabulary

F. Ecology
   1. Occupations
   2. Vocabulary

G. Interest inventory testing and counseling
   1. Interest inventory
   2. Job resumes and personal inventory preparation
   3. Counseling
   4. Job interviews

# Evaluation Results

DO #6 Coos County Careers Grade 8

The following results were obtained from the Teacher Reviewer, Career Education Consultant, and the Language Arts Consultant, each respectively evaluating the unit from a particular expertise and addressing specific areas of concern.

## I. Teacher Reviewer

The Teacher Reviewer rated this unit as satisfactory in regard to level of difficulty.

Flexibility of instructional alternatives was rated high.

The degree of student enthusiasm was most predominant, even in the slow learners.

## II. Career Education Consultant

The Career Education Consultant stated that if recommendations in the previous units were met and incorporated in this unit, he would consider the unit appropriate.

He also commented that the unit was extremely lengthy, and because of this length he would place heavy emphasis on the evaluation report of the Teacher Reviewer.

## III. Language Arts Consultant

The Language Arts Consultant suggested that there was too much in the areas of verbal concepts and vocabulary to expect of an eighth grader.

There was also a problem with the format of the unit. The length of the unit became frustrating.

## IV. Conclusion and Recommendations

This unit should be revised before introduction to students. An attempt should be made to shorten the 33 pages of vocabulary words. The unit should be revised along the lines of L #6.

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# Instructional Unit Evaluation Report

**Project** COULD
**Unit DO #6:** Coos County Careers
**Teacher Reviewer:** Walter Campbell
Coquille Junior High School
Coquille School District
**Grade:** 8

Since this is a unit of many careers in Coos County, the appropriate length of time required to present the unit is flexible. It definitely could not be shorter, but I feel that the unit could be extended for a longer period of time to include field trips or extra speakers. One of the favorable aspects of this unit is the fact that extra activities could easily be included. For example, one of my students suggested that his neighbor, who has a myrtlewood shop, be invited to speak to the class.

As with the eariler unit, there was no problem with easing this unit into the existing curriculum. This too, would fit nicely into an Oregon State History unit.

This unit is especially appropriate in that it illustrates the variety of careers possible in Coos County, some of which are unique to this area of the country, such as cranberries and myrtlewood. Because the students are exposed to these diversified occupations in their daily life, the language development and vocational awareness are very important. In most cases, the students were equal to this unit. However, I found that my experience with one of the games -- activitiy 1-B -- has led me to believe that games of this kind would be more appropriate at a lower grade level. On the other hand, the activity 2-D was successful. Regarding the Personal Data Sheet, I found that there were some questions asked pertaining to the high school student and program which were not applicable to the eighth grade level. The majority of questions on the Personal Data Sheet were appropriate, however.

Due to an interruption of class time to administer achievement tests, this unit has been interrupted. However, I can safely say that the goals and objectives can be met. This again depends on the availability of the activities in the unit.

I do not feel that additional material is needed, unless local resource people not listed in the unit and field trips could be utilized.

Having used two of the COULD units, I found that student interest was greater in this unit than the first, due to the fact that there is more variety in this unit. Also, as in the first unit, I was very gratified to notice an unexpected enthusiasm from the slow learner as he recognized things familiar to him such as the vocabulary.

My attitude regarding this unit is favorable. This is as a result of the satisfactory reception on the part of the students. This unit, with its variety of occupations would not be as apt to become as tiresome to the learner as might be the case in some others. And finally, there is a need for more units of this type. I do not know of any other unit that I have taught in six years of teaching that has been received as well as this.

**Evaluation Report**

Unit DO #6, Coos County Careers
Career Education Consultant: Dr. Ronald Olsen
Grade 8

In general, this unit appeared to cover the essential steps I was interested in. However, it tended to be rather weighty and as a classroom instructor was almost too complicated for me to follow very closely. I think that I would give a great deal of weight to the classroom evaluation on this unit. Maybe a separate folder to hold all examples of materials would be appropriate.

## I. Job Descriptions

Once again the changes that have been previously prescribed should be incorporated in this unit. Maybe as suggested previously, a separate supplement for job descriptions would be appropriate.

## II. Occupational Interrelationships

The interrelationships were okay if the students have previously covered these units. If they have not, then there is some serious gaps in this unit.

## III. Economic Factors

The economics section was alluded to a couple of times. It might be a good idea to once again have students outline the cost of establishing a household, an apartment, a car, etc. How much is it going to take to maintain these items.

Conclusion: In conclusion, this unit tended to cover the necessary points. However, in reviewing it, it seemed to be rather cumbersome and difficult to follow. The inclusion of previously mentioned jobs, interrelationship activities and a special activity ought to be generated in the economic section.

## Evaluation Report

Unit DO #6, Coos County Careers
Language Arts Consultant: Dr. Thomas J. Walker
Grade 8

### I. Validity - Appropriateness of concepts and language development:

Concepts: The desired concepts to be developed for unit DO-6, Coos County Careers in Diversified Occupations, are stated as four goals. Each of the goals has a related behavioral objective to be accomplished by the students. The goals and objectives for the unit seem to be appropriate for eighth grade students. Unit DO-6 appears to be simply a compilation of units DO-1 through DO-5.

Vocabulary: Thirty-three pages of vocabulary words and titles of key occupations are suggested for the vocabulary list. The vocabulary words and occupational titles must be considered review since they have been presented in the previous five units. However, reviewing the words should prove to be a challenge even for bright eighth graders in the four weeks alloted to the unit.

### II. Reliability - Effectiveness of activities in relation to concepts and vocabulary:

The evaluator had difficulty following the organization of the suggested activities. Perhaps the resources should be located under Resources rather than in the Activities section. The Interest Check List from the U.S. Department of Labor looks to be too involved for eighth grade students. Exposing eighth grade students to an Interest Inventory of some type should be a worthwhile activity. Directions for the teacher to obtain such materials as Interest Inventories and Testing Instruments should be more specific. It should be noted that many of the occupational titles listed in the units will be subtitles not listed in the alphabetical list of occupations included in the unit resources.

III. Conclusion - (1) Include all vocabulary words and occupational job titles in the vocabulary section, (2) suggest that the teacher reduce the vocabulary list to terms of interest to each particular class, (3) locate resources for the unit under the resources section, (4) organize the activities section in numerical order, (5) provide an index or table of contents for the following sections: vocabulary, activities, resources.

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# APPENDIX B

# MINUTES OF INTERIM PROGRESS REVIEW MEETINGS

# INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

## MEETING AGENDA

OCTOBER 27, 1971

### 1. General Program Review

1.1 Contract of Project Evaluator
1.2 Planning Phase Goals and Objectives
1.3 Tentative Task List and Schedule

### 2. Progress Report and Evaluation

2.1 Hired October 4, 1971, as Unit Coordinator: Robert C. Lindenman. On contract to prepare lumbering units.
2.2 Example of work to date
2.3 Teacher reviewers - hiring policy
    2.3.1 Difficulties experienced - information dissemination: Planning Coordinator to district, superintendent to principals to teachers to principals to district superintendent to planning coordinator
    2.3.2 Example of letter to superintendents
2.4 Project information dissemination
    2.4.1 Project brochure
    2.4.2 Title III meeting November 1 and 2, Project Director and Planning Coordinator will attend. Hope to acquire more information regarding dissemination procedures
2.5 Units - Progress to date
2.6 Initiation of operational project proposal

### 3. Current Objectives

3.1 Hire at least one more Unit Coordinator
3.2 Hire at least one Teacher Reviewer to begin reviewing units
3.3 Continue operational project proposal draft
3.4 Advisory Board (Superintendent?) - including business in particular occupational area
3.5 Further dissemination of project information

### 4. General Questions

4.1 Should tests be included in units under objectives?
4.2 Lack of available media and material for particular units?
4.3 Evaluation of Planning Coordinator?

# INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

## MINUTES OF MEETING

OCTOBER 27, 1971

These minutes constitute a formal record of the conclusions and recommendations derived from the first interim progress report meeting for Project COULD. Participating in the session on the afternoon of the date listed above were Thomas J. Walker (Project Director), Donald E. Day (Planning Coordinator), and David F. Haasl (Evaluator). The agenda of the meeting with attachments is appended to these minutes.

## General Program Review

The first items of discussion was the contract between Coos County I.E.D. and David F. Haasl, the Project Evaluator. The agreement was mutually satisfactory, the discussion centering around the data items required from Mr. Haasl and the format of the Initial Planning Report. It was first resolved that Mr. Day would continue to provide the agendas for the Interim Progress Review Meetings and that Mr. Haasl would prepare the minutes of these meetings. Secondly, it concluded that Mr. Day would establish the preliminary format for the Initial Planning Review and organize existing materials in accordance with its table of contents. Mr. Haasl will prepare the portions regarding project evaluation and submit them to Mr. Day for incorporation into the report. The subject will again be reviewed in the next Interim Progress Review Meeting.

## Progress Report and Evaluation

The work of Robert C. Lindenman, Unit Coordinator for the instructional units on lumbering, was reviewed in conjunction with the initial unit quality objectives. To the extent that it was completed, the work was concluded to be eminently satisfactory. The opinion was that a problem is going to be maintaining the same level of quality in subsequent units.

Administrative difficulties encountered in the first attempt to hire a teacher reviewer were described by Mr. Day. He found that a lack of knowledge of the project and its objectives on the part of administrators constituted the major stumbling block. This, and other considerations, indicated the need for a high priority regarding the information disseminations aspects of the project. Action to date in this area includes individual letters to the various district superintendents as well as a brochure for more general distribution. More work is needed in this area.

It was reported by Mr. Day that he has begun preparation of the proposal for funding of the follow-on operational project. It was felt by Mr. Haasl that this was somewhat premature in that the planning project is only now starting to provide useful output. However, it was pointed out that deadlines for submission of proposals are a controlling factor. Accordingly, it was determined to continue preparation of the operational project proposal, but with maximal awareness of potential feedback from the planning project.

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Generally, it was found that Project COULD is proceeding on or ahead of schedule with no major obstacles in the offing.

Current Objectives

It was proposed by Mr. Day that at least one of the two remaining Unit Coordinators be hired during the coming month. The decision to delay their hiring had been on the basis that more experience with the project was needed before meaningful and efficient direction could be given them. It was concluded that the desired experience base now exists and an attempt should be made to get both remaining Unit Coordinators on board as soon as practicable.

Mr. Day also proposed that at least one teacher reviewer be hired to begin reviewing units. It was agreed that one should be hired at this time. Further hirings of teacher reviewers should be deferred until some experience is gained regarding the utilization of the first teacher reviewer.

Establishment of the project Advisory Board constituted the next time of discussion. The original concept of such a board presumed formal participation on the part of various educational, industrial, and community representatives. It was concluded that such a board, assembling "en masse" of the project. The two prime objectives to the "formal advisory board approach" are as follows: firstly, such an approach would involve detailed exposure of all board members to topical areas of interest to only a few; and secondly, such sessions would not provide sufficient opportunity for in-depth discussions of particular topics with individual advisors. It was felt that a more streamlined approach to the concept of an advisory board was necessary. Accordingly, the following determinations were made: 1) A formal advisory board "per se" would not be established, 2) The advisory board, 3) Educational, industrial, and community advisors would be contracted on an individual basis to permit optimal utilization of their time and talents, 4) The subject would again be reviewed at the next Interim Progress Review Meeting.

General Questions

The question of introducing tests and/or criteria for student evaluation as a separate subject in the units was discussed. It was established that two categories of tests would be of interest: Evaluation of the units themselves in a classroom situation, and testing of the students to compare their achievements against project norms. It was concluded that evaluation of the units properly belongs to the follow-on operational phase of the project, and that sufficient teacher guidance for student evaluation is implicit in the behavioral objectives of each unit. No action in this area is necessary during the planning project.

The lack of existing media appropriate to the various units was anticipated. The anticipations are being realized in fact. Accordingly, it was decided to identify specific needs in this area for each unit as soon as it is practicable. Subsequent preparation of combined lists at an early time would facilitate the clarification of requirements for media to be procured/developed during the operational project.

The next Interim Progress Review Meeting was set for 22 November 1971.

INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

MEETING AGENDA

NOVEMBER 22, 1971

1. General Program Review
    - 1.1 General Progress to Date
    - 1.2 Interim Project Evaluation Process
2. Progress Report and Evaluation
    - 2.1 Unit Coordinators
        - 2.1.1 Hired Dixon Anne Sheldon, Diversified Occupations (Marketing)
        - 2.1.2 Hired Carol Ann Pack, Diversified Occupations (Dairying)
        - 2.1.3 Robert C. Lindenman completed exemplary model and Lumbering Unit #1. Will complete Lumbering series by December 19 and will then be assigned to Fishing.
    - 2.2 Teacher Reviewers
        - 2.2.1 Deanna Franson
        - 2.2.2 Printing of L #1 for Teacher Reviewers
    - 2.3 Operational Project Proposal
    - 2.4 Consultants Review of Units
        - 2.4.1 Activity of Consultants
        - 2.4.2 Consultants Review Form
    - 2.5 Project Information Dissemination
        - 2.5.1 Meeting with Coos County Lumber Representatives on November 17, 1971
        - 2.5.2 Meeting with Lion's Club on November 23, 1971
        - 2.5.3 Further possibilities
    - 2.6 Media need sheets

## INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

## MINUTES OF MEETING

NOVEMBER 22, 1971

These minutes constitute a formal record of the conclusions and recommendations derived from the second interim progress review meeting for Project COULD. Participating in the session on the afternoon of the date listed above were Thomas J. Walker (Project Director), Donald E. Day (Planning Coordinator), Fredrick K. Packer (Language Arts Consultant), and David F. Haasl (Project Evaluator). The agenda of the meeting with attachments is appended to these minutes.

### General Program Review

Amid an initial general discussion of the over-all progress to date, it was found necessary to review again the specified goals and objectives of the project. After a certain amount of discussion a "meeting of the minds" was achieved regarding the general conduct of the project within the framework of these specified goals and objectives. The project review and evaluation aspects of the Interim Progress Review Meetings were then discussed. It was concluded that these periodic reviews were of sufficient frequency and intensity as to constitute an adequate vehicle for in-process project evaluation.

### Progress Report, Evaluation, and Current Objectives

Two Unit Coordinators have been engaged to begin preparation of the Diversified Occupations Curriculum Units. It was originally intended to utilize a single individual for the preparation of the entire diversified occupation series. This was found to be impracticable due simply to the extent to which the various coordinators is Dixon Anne Sheldon who is working on Marketing; and the second is Carol Ann Pack who has been assigned to Dairying and the Travel Industry. Robert Lindenman, currently Unit Coordinator for the Lumbering Units, is providing eminently satisfactory output ahead of schedule. Mr. Day proposed to assign him to the preparation of the Fishing units when he finishes with lumbering (December 19). There was unanimous concurrence with this suggestion.

Mr. Day reported that he has been having some difficulty in locating potential teacher reviewers who are both qualified and available. Only one individual, Deanna Franson (Milner Crest, Coos Bay), has been found to date that satisfied both particulars. Negotiations with her are in progress. It was suggested that local district superintendents be contacted to provide a list of recommended teachers. Mr. Walker and Mr. Day agreed to thrash around a bit in this area. In the meantime the first Lumbering unit is being printed to be ready for teacher review when a reviewer becomes available. It was further determined that the number of teacher reviewers would initially be limited to two. Additional teacher reviewers would not be employed until sufficient experience had been gained with the first two teacher reviewers to establish how to best utilize the time and talents of teacher reviewers on the project.

It was reported that the first draft of the Operational Project Proposal was in preparation. Mr. Day indicated that a meeting with Dr. Mellbye to discuss this subject as well as project information dissemination has been scheduled for December 1, 1971.

Utilization of the Vocational Education and Language Arts consultants for unit review was then discussed. The initial expectation was that they would review and comment on the draft units as they have been submitted by the various unit coordinators. A format has been prepared that would provide a formal record of this review (Reference Agenda Item 2, 4.2 attached). Considerable discussion ensued and Ron Olsen, the Vocational Education Consultant was requested to join the meeting. There was concurrence, however, that input from the two consultants must be provided early in the preparation of a unit (i.e., when occupational concepts, projected verbal skills, behavioral objectives, and other such particulars are being established for a particular unit) as well as when the first draft of the unit is completed. It was agreed that subsequent meetings of the Planning Coordinator and the Language Arts and Vocational Education Consultants will take place to resolve the issue prior to the next Interim Progress Review Meeting.

The next subject of discussion was the dissemination of project information. Mr. Day reported that a presentation had been given to the Coos County Lumber Representatives on November 17, and that a presentation to the Lion's Club is scheduled for November 23. It was agreed that the dissemination aspect of the project retained its high priority and more must be done. For the time being it was decided to prepare a formal presentation including slides and charts to have available whenever a suitable opportunity would arise.

It has been recognized since the inception of the project that a substantial amount of instructional media must be available to allow optimal utilization of the units. It is becoming increasingly obvious that the major portion of these media are not available on an "off-the-shelf" basis. They will have to be developed during the operational phase of the project. Recognizing that the preliminaries to this activity must begin early if it is to be efficiently conducted, Mr. Day proposed that the unit coordinators do the initial "spadework" in this area. The results of their investigations are to be recorded by completion of "media need sheets" (Agenda Item 2.6). The project staff will subsequently collate and integrate the media requirements into a cohesive package. This will form the planning basis for the media preparation/procurement portion of the operational phase.

The next Interim Progress Review Meeting was set for February 2, 1972.

# INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

## MEETING AGENDA

FEBRUARY 2, 1972

1. General Program Review
    - 1.1 Status of Units
    - 1.2 Consultants' Evaluation of Units
    - 1.3 Teacher Reviewers' Evaluation of Units

2. Current Problems
    - 2.1 Lack of Standardization in Unit formats and content
    - 2.2 Status of Operational Project Proposal

3. Further Questions
    - 3.1 Objectives of Operational Project
    - 3.2 Date of Next Meeting

## INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

### MINUTES OF MEETING

FEBRUARY 2, 1972

These minutes constitute a formal record of the conclusions and recommendations derived from the third interim progress review meeting for Project COULD. Participating in the session on the afternoon of the date noted above were Thomas J. Walker (Project Director), Donald E. Day (Planning Coordinator), and David F. Haasl (Project Evaluator). The agenda of the meeting is appended to these minutes.

### General Program Review

It was reported by Mr. Day that all eighteen units were either completed in draft form or in preparation. It is anticipated that draft copies of all units will be completed within sixty days. The units, as they are completed, are being turned over to Drs. Fred Packer and Ron Olsen - respectively the Language Arts and Career Education Consultants - for their review and comments. They are being concurrently submitted to the Teacher Reviewers for their trials and evaluations. (Some Teacher Reviewers are still to be hired.)

### Current Problems

The most nagging current problem involved a lack of standard evaluation guidelines for the reviewing consultants and the teacher reviewers. Accordingly the following evaluation criteria were established for the various reviewers as indicated.

CAREER EDUCATION

1. How comprehensive is the unit with respect to the identification of key occupations?

2. Is the unit sufficiently thorough in its treatment of each occupation?

3. How adequate is the development of the specified career concepts with respect to occupational interrelationships, regional economics, and environmental implications?

LANGUAGE ARTS

1. Are the verbal concepts and vocabulary appropriate to the intended group of children (validity)?

2. How effective are the various programmed activities in promoting the development of language skills (reliability)?

TEACHER REVIEWERS

1. How appropriate are the specified concepts, vocabulary, and programmed activities to the intended children?

2. How flexible is the unit in terms of applying the instructional alternatives in a variety of classroom situations and curriculum schemes?

3. How much enthusiasm does utilization of the unit generate on the part of children and the reviewing teacher?

The status of the operational project proposal constituted the next question. It was discussed, but no action on the part of the project could be projected at this time.

## Further Questions

The objectives of the operational project as submitted were reviewed. It was concluded that an attempt at more specific delineation of the objectives should properly be deferred until more feedback were available from the various reviewers. Finally the date for the next Interim Progress Review Meeting was set for 31 March.

# INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

## MEETING AGENDA

MARCH 31, 1972

1. General Program Review
    1.1 Status of Units
    1.2 Status of Unit Reviews and Evaluations
    1.3 Status of Operational Proposal
2. Current Problems
    2.1 Revision of Concepts and Behavioral Objectives of all Units
    2.2 Content and Editorial Revision of Units
3. Further Questions
    3.1 Action if Operational Proposal is not funded
    3.2 Date of next meeting

# INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

## MINUTES OF MEETING

MARCH 31, 1972

These minutes constitute a formal record of the conclusions and recommendations derived from the fourth interim progress review meeting for Project COULD. Participating in the session on the afternoon of the date listed above were Thomas J. Walker (Project Director), Donald E. Day (Project Coordinator), and David F. Haasl (Project Evaluator). The agenda of the meeting is appended to these minutes.

### General Program Review

Mr. Day reported that all units had been completed in draft form with the exception of Fishing Unit F #6. Completion of that unit is expected very shortly. Reactions from the Language Arts and Career Education consultants as well as the Teacher Reviewers indicate that it is imperative to revise the concepts and behavioral objectives of all eighteen units. In their present form they are both non-uniform and non-explicit. It was agreed that Robert Lindenman would be put on contract to handle these revisions. It was also noted that virtually all of diversified occupation units as developed at this time are useless. For all practical purposes they must be completely re-done. The balance of the units in lumbering and fishing require editorial revisions for uniformity and content. It was again agreed that Mr. Lindenman would be the natural choice for this task. As a final item, Mr. Day reported that word had just been received that the operational project proposal was approved by the State Advisory Board.

### Current Problems

As discussed above, the major current problems involve getting the units in appropriate shape. Action is being taken.

### Further Questions

A discussion of potential courses of action if the operational proposal is not funded was the next question. It was decided to wait and see. The date for the next Interim Progress Review Meeting was set for April 24.

# INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

## MEETING AGENDA

APRIL 24, 1972

1. Program Overview
    - 1.1 Status of Units
    - 1.2 Approval of Operational Program
    - 1.3 Planning Phase Evaluation Report
2. Current Problems
    - 2.1 Rework of unsatisfactory units
    - 2.2 Uniformity in unit quality and format
    - 2.3 Planning Program Fiscal status
3. Further Questions
    - 3.1 Date of next meeting

# INTERIM PROGRESS REVIEW MEETING - PROJECT COULD

## MINUTES OF MEETING

APRIL 24, 1972

These minutes constitute a formal record of the conclusions and recommendations derived from the fifth interim progress review meeting for Project COULD. Participating in the session on the afternoon of the date listed above were Donald E. Day (Planning Coordinator) and David F. Haasl (Project Evaluator). Robert C. Lindenman (Unit Coordinator) was present by request during portions of the meeting to provide clarification of specific points regarding the preparation and evaluation of selected units. The agenda of the meeting is appended to these minutes.

### Program Overview

It was reported by Mr. Day that the first drafts of all eighteen units have been completed. With the exception of three units - diversified occupation units #1, #4, and #6 - teacher reviewer reactions have been highly favorable. Questioning by Mr. Haasl revealed that the three units in exception had each been reviewed by at least two Teacher Reviewers to eliminate any possibility of bias; the reactions were uniformly unfavorable.

Mr. Day then indicated the follow-on the operational proposal had been approved by the state. Negotiations for funding are expected to commence during July. The operational program grant would then become effective as of September 1, 1972.

Discussion then centered upon the preparation of the planning phase final evaluation report. In anticipation of this effort it was agreed to undertake the following prior to the next Interim Progress Review Meeting: Mr. Haasl would prepare an outline of the final evaluation report; and Mr. Day would begin preparation of the background and explanatory synopsis of each unit for inclusion in this report.

### Current Problems

The most critical problem of the moment involves the three unsatisfactory curriculum units. Examination of the units and the attendant Teacher Reviewer reactions indicated that substantial rework is essential if the units are to be any real worth in the classroom. Mr. Lindenman indicated his willingness to undertake this activity. Mr. Day agreed to submit the question of this assignment to Dr. Walker for approval.

The first draft copies of the balance of the curriculum units were then reviewed in detail. A lack of uniformity in format and quality was pointed out by Mr. Day and Mr. Lindenman. Mr. Haasl agreed that upgrading of units to a uniform standard was a desirable end if it were possible. It was felt, in addition, that a more comprehensive review of applicable units on the part of the various Industry Advisors could be beneficial.

Mr. Day indicated that present fiscal allocations would not permit it; however, the program was in the condition of a contractual underrun. The program budget was then reviewed and allocations versus expenditures compared.

The budget analysis indicated that while there would be an underrun of an estimated $900.00 in the Instructional Materials and Supplies category, the chief source of program underrun was due to the fact that a formal project advisory council was not established.* $3,450.00 was allocated for expenses in this area and remains virtually untouched. Considerable discussion ensued regarding the intent of the original allocation (i.e., coordination with industry and other resource agencies) and the unfinished business described in the preceding paragraph. It was determined to recommend to Dr. Walker that the Grant Agency be requested to approve a transfer of the funds currently budgeted for the Advisory Council as administrative expenses to the Professional and Non-professional salary categories for instructive services. Details are to be discussed with Dr. Walker at a later date.

## Further Questions

The date for the next Interim Progress Review Meeting was set for ?

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*Refer to Minutes of Project COULD Interim Progress Review Meeting of October 27, 1971.

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# APPENDIX C

## CALENDAR OF ANTICIPATED DUE DATES

# PROJECT COULD

## Calendar of Anticipated Due Dates

1. April 15, 1971 to August 15, 1971 -- Selection of Planning Coordinator

2. September 1, 1971 to September 30, 1971 -- Revision, clarification of Planning Project Proposal

3. August 1, 1971 to September 1, 1971 -- Goals and Objectives developed and complete

4. September 15, 1971 to September 30, 1971 -- Unit Framework #8 due (incomplete)

5. September 15, 1971 to October 15, 1971 -- Establishment of Advisory Board, Target Occupations and selection of Unit Coordinators and Advisors (teacher reviewers)

6. October 15, 1971 -- Planning Coordinator and Unit Coordinators begin gathering resource material

7. October 15, 1971 to November 24, 1971 -- Preparation of frameworks of Instructional Units, and Review, Evaluation and Revision (completed) of unit frameworks (under Lumbering Target Occupations)

8. November 24, 1971 -- Planning Project Proposal monitored

9. October 1, 1971 to January 20, 1972 -- Preparation of Preliminary Operational Project Proposal (Proposal due February 1, 1972)

10. December 1, 1971 to January 15, 1972 -- Preparation of frameworks of Instructional units, and Review, Evaluation and Revision (completed) of unit frameworks (under Fishing Target Occupations)

11. January 16, 1972 to February 29, 1972 -- Preparation of frameworks of Instructional units, and Review, Evaluation and Revision (completed) of unit frameworks (under Diversified Target Occupations)

12. February 1, 1972 -- Planning Project Proposal monitored

13. March 1, 1972 to April 15, 1972 -- Total review of the eighteen Occupational units, Revision where necessary (in reference to goals and objectives of Planning Project Proposal and Evaluation)

14. March 15, 1972 -- Planning Project Proposal monitored

15. June 15, 1972 to June 30, 1972 -- Evaluation of Planning Project

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# APPENDIX D

## EXEMPLARY MODEL UNIT

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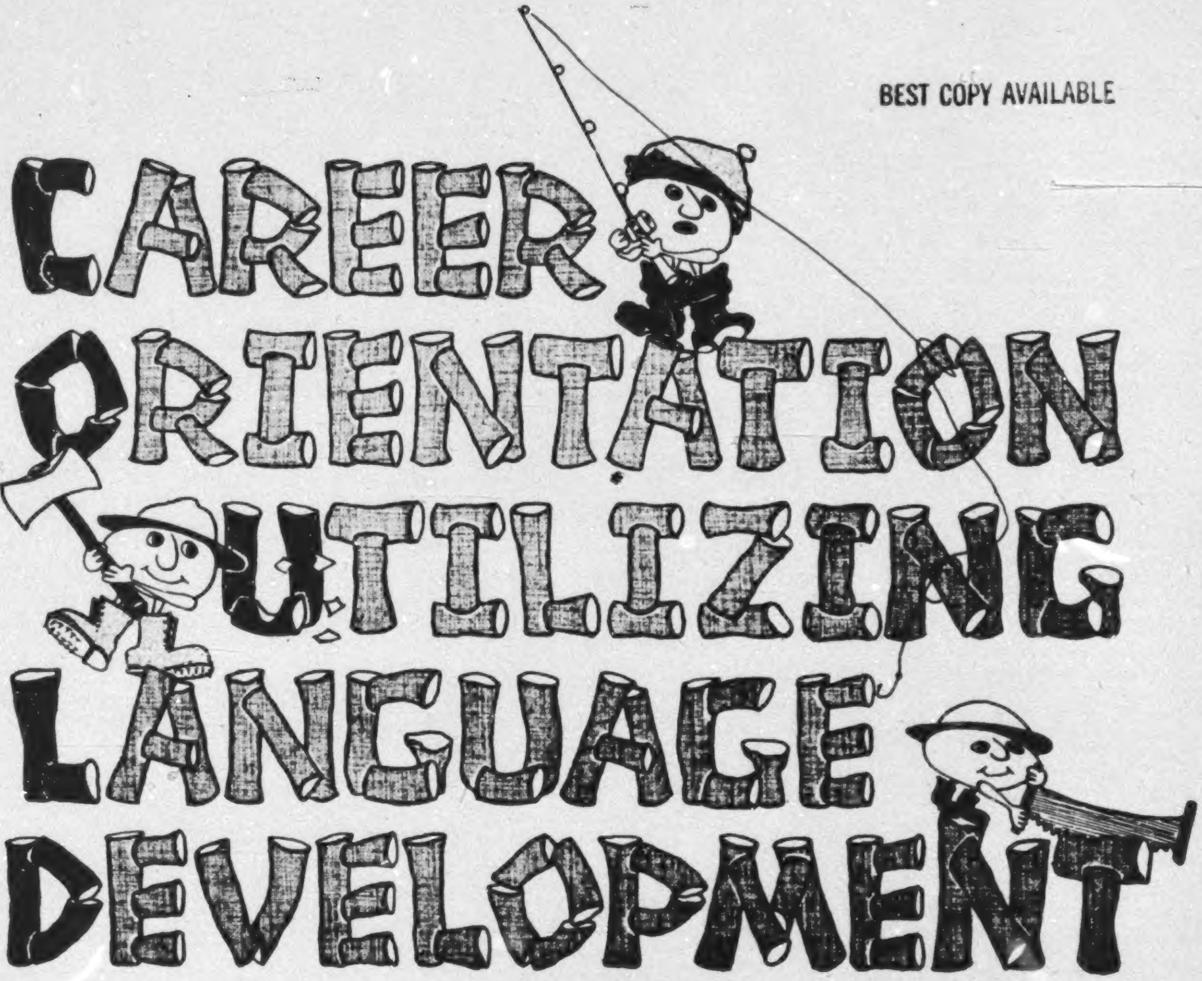
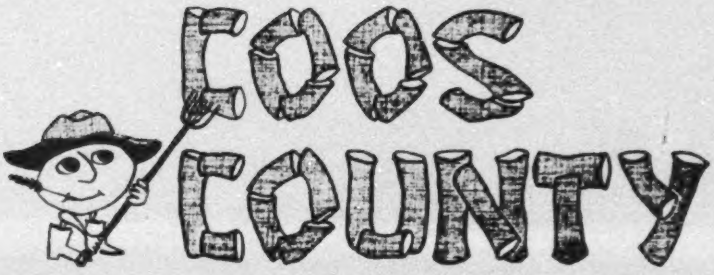


# CAREER ORIENTATION UTILIZING LANGUAGE DEVELOPMENT



## COOS COUNTY

## EXPLANATION OF EXEMPLARY MODEL UNIT FOR USE BY UNIT COORDINATOR

This unit should be used as a guide and reference while writing a unit. Planning Phase Goals and Objectives, included in the packet, can be used as a check list for each unit; if the unit does not meet the criteria established in the Planning Phase Goals and Objectives, the unit will be considered incomplete. At the end of each section in the unit, there will be a "Note." These notes are to be used strictly as guides and things to remember while writing a unit. They, the "Notes," will not be included in the completed unit. It is strongly suggested that the Unit Coordinator carefully read over the exemplary model unit to avoid confusion while writing a unit; know what you want to say and why you want to say it before you write it. This exemplary model unit is not an example of a completed unit; it is only a guide. Particular problems will arise while writing a unit that were not taken into consideration. If at any time the Unit Coordinator is in doubt, consult with the Planning Coordinator, Don Day, before writing; this will save the Unit Coordinator from unnecessary revision. There are two consultants for the project: Vocational Education Consultant, Dr. Ron Olsen; Language Arts Consultant, Dr. Fred Packer. Please feel free to ask for help.

PROJECT COULD

UNIT F #3

SUB-UNIT A

SEAFOOD PROCESSING

BOTTOM FISH

RESOURCE UNIT

# PROJECT COULD

## CAREER ORIENTATION UTILIZING LANGUAGE DEVELOPMENT

## A PACE PROJECT

Elementary and Secondary Education Act of 1965

Project COULD was developed as a means of building skills, knowledges, and attitudes upon elementary children's previously acquired backgrounds. Children learn to speak the grammar and vocabulary characteristic of the language heard most frequently at home and in the immediate environment.

A series of units of instruction were developed from the concepts and vocabulary of the industries indigenous to Coos County. The intention was to promote vocational awareness, exploration, and language development for the students in grades 3 to 8.

The information in this unit was prepared for use at the fifth grade level for an approximate period of four weeks.

Materials prepared by Project COULD are available from the IMC of Coos County Intermediate Education District, 2405 Colorado Street, North Bend, Oregon 97459.

### SCHEDULE OF UNITS

| Grade Level | Lumbering | Fishing | Diversified Occupations |
|---|---|---|---|
| Grade 3 Unit L #1 | Logging | Unit F #1 Harvesting Fish | Unit DO #1 Special Crops |
| Grade 4 Unit L #2 | Transportation | Unit F #2 Harvesting Shellfish | Unit DO #2 Dairying |
| Grade 5 Unit L #3 | Processing | Unit F #3 Seafood Processing | Unit DO #3 Tourism |
| Grade 6 Unit L #4 | Marketing | Unit F #4 Marketing | Unit DO #4 Marketing |
| Grade 7 Unit L #5 | Ecology | Unit F #5 Ecology | Unit DO #5 Ecology |
| Grade 8 Unit L #6 | Coos County Careers | Unit F #6 Coos County Careers | Unit DO #6 Coos County Careers |

Note: Paragraph number three changes per unit.

SUMMARY

This instructional packet is divided into eight sections. Each section is tabulated for easier use and quick reference.

**Summary:**
This page gives an idea of the overall schedule of units, produced by Project COULD, under the three occupational areas.

**Outline:**
This section gives an overall view of the areas to be covered. Details of the information to be covered in this particular unit are outlined.

**Concepts:**
**Objectives:**
**Activities:**
These three sections are sequentially integrated to clearly define what activities are suggested for a particular objective and a particular concept. Each concept, objective and activity is numbered to correspond with one another.

**Vocabulary:**
All terminology found in the unit, including particular occupations, is included in this section. Each term is defined.

**Resources:**
Locally produced material, Coos County resource people, books, pamphlets and commercially prepared media is listed.

**Background:**
This section contains additional material for teacher use.

SUMMARY

# SEAFOOD PROCESSING

## UNIT F #3 OVERVIEW

The following outline represents the scope of the entire set of units (grades 3 - 8) for the category of FISHING. The specific contents for:

UNIT F #3 Sub-Unit A, Seafood Processing, Bottom fish, would be under 3a below.
NOTE: Unit F #3 should be completed in four weeks

Suggested time:
1. Bottom fish: 2 weeks
2. Salmon and Tuna: 1 week
3. Shellfish: 1 week

### FISHING

(Unit F #1) 1. HARVESTING FISH
- (a) Salmon
- (b) Tuna
- (c) Bottom fish

(Unit F #2) 2. HARVESTING SHELLFISH
- (a) Crabs
- (b) Shrimp
- (c) Oysters
- (b) Clams

(Unit F #3) 3. SEAFOOD PROCESSING

Sub-Unit A (a) Bottom fish
1. Transferred from boat to fish tote on loading dock
2. Fish sorted by kind and graded by size in warehouse
3. Types of Bottom fish
4. Filleted by species and wages paid filleters by the hour and the pound
5. Fillet dipped in preservative and graded
6. Fillet packaged, weighed, and labeled for shipment
7. Fillets stored in cooler or freezer and trucked refrigerated to market

Sub-Unit B (b) Salmon and Tuna
Sub-Unit C (c) Shellfish

OUTLINE

(Unit F #4) 4. MARKETING
- (a) Fish Markets
- (b) Grocery Stores
- (c) Restaurants
- (d) Institutions

(Unit F #5) 5. ECOLOGY

(Unit F #6) 6. COOS COUNTY CAREERS

Note: 1. Details of outline will be undeveloped and incomplete; only the unit to be covered will be in detail in the outline.

2. Keep in mind in 3a (and other units) that the process maybe important, but it is only secondary to the objective of the unit. Creating an awareness of the occupations and the language (vocabulary and terms) of the occupations is the primary objective of each unit. Process should be secondary to the occupations. Units should be between one (1) and four (4) weeks long.

OUTLINE

# SEAFOOD PROCESSING-----BOTTOM FISH

## UNIT CONCEPTS

1. The seafood processing industry has a unique set of terms that are used to facilitate communication among the people working in the industry.

2. There are a variety of ways in which seafoods are processed, depending upon the kinds of fish and the nature of their use.

3. The seafood industry has a basic processing technique which is similar to processing in other food industries.

4. Seafood processing plays an integral part in the total economy of the seafood industry in Coos County.

5. The seafood processing industry in Coos County offers a number of opportunities for employment on a seasonal basis.

6. There are significant environmental factors that influence the degree of existence of the seafood processing industry in Coos County.

Note: Remember that the particular industry and process of that industry are important, but the occupation and the language indigenous to the occupation must be stressed. Concepts, objectives, and activities must be in sequence. Unit Concepts should be broad enough to cover the entire unit, including a unit that is divided into sub-units.

CONCEPTS

# UNIT OBJECTIVES

1. Given a prepared list of terms indigenous to the seafood processing industry the student will be able to write an expository essay in which they state the steps of the processing of at least one of the three (3) categories of processed fish. At least 50% of the given terms under one of the three categories of processed fish will be included in the essay. The terms used in the essay will be underlined and must be used correctly (this will demonstrate the students' ability to utilize the terminology, and it will demonstrate his comprehension of the seafood processing industry).

2. While viewing a slide presentation on the different types of seafood processing, each student will identify and describe the various steps of the differents types of processing.

3. From the acquired knowledge of seafood processing, the students will be able to combine their knowledge and postulate the process that may be involved in a given product in another food industry.

4. The student will be able to write why local processing of fish is important to the seafood industry in Coos County.

5. Given a list of job titles from the seafood processing industry, students will write the position, (a) entry requirements, (b) wages and benefits, (c) steady or seasonal employment, (d) working conditions, and (e) opportunities for advancement.

6. The student will outline the various environmental factors that contribute to the existence of the seafood processing industry in Coos County.

OBJECTIVES

## SUB-UNIT A OBJECTIVES

1. Given a list of terms (found in the Vocabulary Section) indigenous to the processing of Bottom fish the student will be able to write an expository essay on the processing procedure. (At least 75% of the terms will be included in the essay. The terms used in the essay will be underlined. The student will have 45 minutes to complete the essay.)

2. While viewing a slide presentation on the processing of Bottom fish, each student will identify and describe the various steps in the processing procedure.

3. From the acquired knowledge on the processing of Bottom fish, the students will be divided into two groups, and each group will postulate the possible steps that may be involved in the dairy processing industry. Each group will be given 15 minutes to organize. Both groups will represent themselves with a panel and the class will listen to the different approaches. The teacher will monitor the discussion of the panels.

4. The students will be able to tell why the processing of Bottom fish is important to the local economy, and (essential because of quick spoilage.)

5. Given a specific job title relative to processing Bottom fish, the students will be able to state (in their own words) the position in relation to, (a) special requirements, (b) wages and benefits, (c) steady or seasonal employment, (d) working conditions, and (e) opportunities for advancement.

6. Students will be able to outline the various environmental factors that contribute to the existence of the processing of Bottom fish in Coos County.

OBJECTIVES

Note: A unit may or may not be divided into sub-units, depending on the material to be covered. If a unit is divided into sub-units, the unit must have "Unit Objectives" followed by "Sub-Unit Objectives." Objectives must follow concepts in sequence. Objectives are a source of evaluating the students terminal behavior. In other words, instructional objectives must be stated in performance terms. Please adhere to the philosophy stated in Robert F. Magers book: Preparing Instructional Objectives (Fearon Publishers, Palo Alto, Calif., 1962). Overall goals and objectives should always be kept in mind while preparing unit objectives, since the unit objectives must meet the requirements of the project objectives. Objectives must be written so that on evaluation (tests) may be easily divised.

OBJECTIVES

# VOCABULARY

## TERMS

Bottom fish - fish that live on the ocean floor (bottom of the ocean) Bottom fish are used for food and are already filleted when bought in the market.

Cod - a fish that has spiny fins

Conveyor belt - machinery used to transport (convey) fish and ice on a belt

Dover - a type of sole, good for filleting

Dragger - a commerical fishing boat that drags a net in the bottom of the ocean to net Bottom fish

Dragger - this term can also refer to the fishermen on a drag boat

Drag boat - same as a drag boat

Fillet - flat, usually boneless piece of fish

Flounder - a flatfish, sole

Fork lift - a small vehicle used for lifting Pallets

Glazing - perserving process; freezing the fish, dipping the frozen fish in water (fish is covered with a light film of ice), then stored in freezer

Grading - fillets are "graded" according to their quality and size. There are two main grades: #1 and #2. #1 grades are large quality fillet with flawless cuts in its surface. #2 grades are smaller fillets with ragged cuts made by the filleter.

Groundfish - this word means the same as Bottom fish, but the word "Groundfish" is not used as much as the word "Bottom fish."

Hardhead (Idiot) - an ocean catfish that can be filleted. A very colorful fish.

Ling cod - a type of cod (Bottom fish)

Otter trawl - a drag net (Bottom fish net)

Otter trawler - a dragger

VOCABULARY

Otter trawling - drag net fishing

Pallet - a small wooden frame that can be lifted by a Fork lift

Perishable - fish that are caught must be kept cold or they will begin to rot (perish)

Petrale - a Bottom fish, sole

Red snapper - a Bottom fish of quality grade, reddish in color

Rex - a small sole that looks like a Dover. Generally, a Rex is not filleted, but Rex-cut.

Rex cut - generally smaller fish that cannot be filleted are Rex-cut. The head and tail are cut off and the skin is removed.

Rockfish - mostly cod and snapper found around rocky formations

Sole - a flatfish with a small mouth. Their eyes are close together. They are found on the ocean floor.

## KEY OCCUPATIONS

Filleter: person that fillets fish (usually a woman)

Dockworker: unloads fish from boats, empties fish on to conveyor belts for filleters, loads packaged fish in trucks, via fork lift, and general maintanence

Grader: person that determines the weight and quality (grade) of the fish. Also sorts fish according to species (less or type)

Pocker: pocks fish that have been graded for shipping

Note: Vocabulary must include not only terms, but also key occupations, and all terms and occupations must be defined, and in detail if needed. In some instances diagrams may be necessary to illustrate certains terms.

VOCABULARY

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| Week | Monday | Tuesday | Wednesday | Thursday | Friday | |
|---|---|---|---|---|---|---|
| 1st Week | | | | | | Processing Bottom fish |
| 2nd Week | | | | | | |
| 3rd Week | | | | | | Processing Salmon and Tuna |
| 4th Week | | | | | | Processing Shellfish |

The numbers on the calendar refer to activities on the following page, which parallel objectives and concepts. These are suggested activities which the instructor is free to modify and/or improvise.

ACTIVITIES

## LEARNING ACTIVITIES

1-A. Present the class with a list of vocabulary words used in the processing of Bottom fish, and the key occupations. Definitions should be included in the list. Each word should be discussed to clarify its meaning. Students should be encouraged to make notes on the list. Using a flow chart, incorporate each term of the processing of Bottom fish using the vocabulary (terms). This should be handled on a question and answer basis, including a class discussion on the whys and hows of processing. The terms should be a working vocabulary to facilitate communication in regard to processing and the people involved with processing.

1- B. Introduce the film, Catching, Filleting, Packaging, with a discussion of the terms used and not used in the film.

1- C. Present slides from COULD prepared material that will illustrate the vocabulary.

1- D. Show 2x2 slides to illustrate the terminology and key occupations.

Note: Activities must be in sequence with concepts and objectives. Each unit may be as long as four (4) weeks and as short as one (1) week, depending upon the material to be covered and the grade level. Numbers should be placed on the calendar which refer back to the detailed list of activities. There should be as many activities and as many alternate activities to allow for maximum teacher innovation and flexibility of application.

ACTIVITIES

# COOS COUNTY RESOURCE PEOPLE AND LOCATIONS

The following people and places are available as resources for such activities as field trips, slide talks, video commentators, information sources, and photographic settings.

| | |
|---|---|
| Paul Heikkila | Marine Extension Agent |
| Ken Hildebrand | Seafood Technologist |
| Tom Peterson | Peterson Sea Foods |
| Roy Sinclair | Peterson Sea Foods |
| Larry Nelson | Eureka Fisheries |
| Kerry Cox | Hallmark Fisheries |
| Arnold Hackama | Drag Fisherman |
| Bob Green | Drag Fisherman |
| Fred Anderson | Drag Fisherman |
| Leonard Hall | Drag Fisherman |
| Dick Lillianthal | Drag Fisherman |

## Commerically Prepared Materials

Included below is a listing of printed materials that would be reviewed for teacher and student background information. Some of the material can be utilized as it is printed, while some of it will be revised to meet the grade level needs of the students.

| BOOKS AND PAMPHLETS | PUBLISHER |
|---|---|
| The Common Wealth in Ocean Fisheries | John Hopkins Press |
| Fish as Food | Academic Press |
| American Food and Game Fishes | Dover Publications |
| The Fisheries Story | Silver Burdett |
| Background On Oregon Marine Industry | OSU Extension Service |
| Canning of Fishery Products | Miller Freeman Pub. |

RESOURCES

# SUB-UNIT A

## LOCALLY PRODUCED RESOURCES

As part of the project a number of resources would be produced.* The kinds of materials would be printed booklets for students, video tape recordings, charts, 2x2 color slides, and audio tape recordings.

Some of the materials are listed below:

### VIDEO TAPE RECORDINGS

Unloading Bottom fish at the processing plant
Grading and sorting Bottom fish
Cleaning and filleting Bottom fish
Sorting, grading and packaging Bottom fish

### 2 x 2 SLIDES

Varieties of Bottom fish
Fish processing equipment
Fish processing personnel
Environmental factors - geography, etc.

### CHARTS

Parts of a Bottom fish
Fish processing flow chart
Physical features of Coos County
Economic relationships

### BOOKLETS

Field Guide to Common Marine and Bay Fishes of Oregon
Background on Oregon's Marine Industry
Food fish for the Future
Handling Fresh Fish

* Since this is the planning phase of the project these materials would be produced under the operational phase of ths project.

__Note__: The list of material on this page will be tentative. Productions of this material will be developed when this project becomes operational.

RESOURCES

Commercially Prepared Media

The following commercially prepared media would be reviewed for selection of appropriate materials for use in the unit:

| 16mm Film | Source |
|---|---|
| Conquering The Sea | McGraw-Hill |
| Catching, Filleting, Packaging | USDI |
| From The Bottom Up | Serina |
| Dressing of the Fish | Sterling |
| Products of the Sea | Serina |
| How To Fillet Fish | Serina |
| Sound Filmstrip | |
| Life on the Sea Floor and Shore | Filmstrip House |
| Careers in Natural Resources Management | Vocational Ed. |
| Filmstrip | |
| Western Fisheries | Curriculm Materials Corp. |
| 2 x 2 Slides | |
| Common Fresh and Salt Water Fish | Ed. Media |
| Fishes | Ed. Media |
| North American Marine Fishes | CCM |

Note: All commercially prepared media should be reviewed by Unit Coordinator if at all possible. Do not rely strictly upon material produced in the operational phase.

RESOURCES

Bottom fish are sold on market demand. They are processed, (filleted or Rexed) frozen and shipped by truck to various markets. Coos County Processors ship processed fish all over the United States.

It is too expensive to ship unprocessed Bottom fish by truck to another processor although 90% of Bottom fish are sold in Los Angelos and San Francisco, they must be processed locally. Without local processing there would be no Bottom fish industry in Coos County.

## Jobs

Dockworker - unload boats, work fish to filleters by conveyor belt, help pack fish, load trucks, operate fork lift, and carry on general maintanence, pay $2.25 an hour to start, can go higher depending upon individual.

Filleters - do the actual cutting of fish, must be trained for different cuts used, it takes 8 months to train filleters, person with no experience is perferred, paid on poundage,(certain fillets, certain price per pound) minumum wage is $1.60, but most filleters can make $3.25 an hour and up depending on the skill and speed.

Packers - (weighers and graders) weigh in fish, grade according to species and quality, dipped in perservative, beginning wage is $1.85 an hour.

Although Bottom fishing is a year round operation, November to February is considered the slow season. During this time boats find it extremely difficult to fish because of adverse weather.

Note: Background information will be strictly used for teacher use and should encompass enough material so that the instructor will be familar with the occupations and processes involved.

BACKGROUND

# BACKGROUND INFORMATION

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Oregon's marine industry includes nearly 3,000 commercial fishmen harvesting over 93 million pounds of salmon, crab, sole, rockfish, perch, shrimp, tuna, oysters, and other seafood. There are 42 processors cleaning, freezing, and packaging this harvest. There are also a large number of people involved in the transportation and marketing of this seafood.

The marine industry is dependent upon a vast Oregon resource, the Pacific Ocean. Off-Oregon summer winds produce coastal upwelling of cold, nutrient-rich water from the depths which leads to abundant food for sea life and challenging climatological conditions for ocean commerce.

Oregon's fishermen landed $17.6 million worth of tuna, salmon, crab, sole, perch, cod, shrimp, oysters, clams, and crayfish in 1969, and processors, distributors, and retailers added over $40 million to the value of this seafood before it reached the consumer.

Fishing vessels, from 19-foot dories trolling for salmon off Pacific City to 80-foot draggers netting sole and perch off Coos Bay, landed a total of 85.5 million pounds of seafood in 1969. Groundfish such as sole and flounders usually comprise the greatest volume of seafood landed. But because of the relatively higher dockside prices, both salmon and tuna usually exceed groundfish in value of landings.

Groundfish live and feed on the floor of the continental shelf. Since the continental shelf off Oregon ranges from 9 to 40 miles in width and from the shoreline to a maximum water depth of 470 to 600 feet, the groundfishermen (often referred to as draggers or otter trawlers) rarely fish more than 40 miles from the coast. The total volume and value of their landings has remained relatively constant over the past 10 years.

Fillet of Rex sole, frozen shrimp, or shucked oysters in the restaurant or retail store bear little resemblance to the sole, shrimp, or oysters landed at the processors dock. Processors, distributors, and retailers added more than $40 million to the landed value of Oregon's seafoods in 1969 through filleting, cleaning, freezing, packaging, transporting, displaying, distributing, and cooking this seafood.

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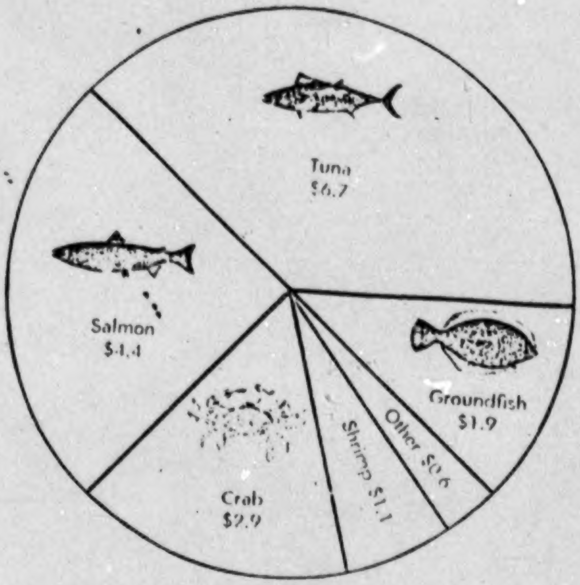

Oregon Commercial Fish Landings, Million Dollars at Fisherman Level, 1969

Some fifty-two Oregon seafood distribution and processing establishments employ a total of 2,869 people. Employment in this industry increased 55 percent during the 10-year period 1958-1968. The value of processed products in 1966 was $31,596,170, the majority of which was canned tuna ($18,701,034) and canned salmon ($4,199,485). Large quantities of canned products and frozen salmon, groundfish fillets, frozen shrimp, and frozen crab find their way to such distant markets as Paris, London, Stockholm, and Rome.

Not only is Oregon's seafood reaching new customers throughout the world, but seafood consumption in the United States is beginning to increase on a per capita basis, after remaining relatively static at about 10 1/2 pounds for more than a decade. Total domestic consumption has risen significantly with population, and increasing amounts of seafood by-products are being used in producing agricultural livestock. In fact, when the seafood consumed directly is added to that used for other purposes, use in the U.S. jumps to 75 pounds per person.

Oregon is not yet feeding the world from her ocean, but world consumption of seafood is supporting and stimulating a valuable and viable seafood industry in Oregon.

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# APPENDIX E

## JOB DESCRIPTIONS - UNIT COORDINATORS AND TEACHER REVIEWERS

# UNIT COORDINATOR: JOB DESCRIPTIONS AND RESPONSIBILITIES

## SUMMARY

The Unit Coordinator's responsibility will encompass the actual writing of the units under one of the three target occupations (lumbering, fishing, and diversified occupations). Each Unit Coordinator will write and complete six (6) units, with the exception of diversified occupations (more than one Unit Coordinator may be required in this Target Occupation).

## DETAILS

1. The Unit Coordinator will make a preliminary review of exemplary Unit #8. This will be done with the Planning Coordinator. Suggestions as to content and length will be settled. Overall goals and objectives and their incorporation into each unit will be stressed. The Planning Coordinator will explain the paralleling of concept, objectives and activities.

2. With the suggestion of the Unit Coordinator, the Planning Coordinator will rewrite Unit #8 (sub-unit A) in completed form. At this time the Unit Coordinator will begin gathering resource material for preparation of the units.

3. Upon completion of Unit #8 (sub-unit A) the Unit Coordinator will use Unit #8 (sub-unit A) as an exemplary model for the preparation of the units.

   A. The Teacher Reviewer will use Unit #8 (sub-unit A) as an experimental teaching unit, and his written report on Unit #8 exemplary model will be used as a further guide by the Unit Coordinator.

4. The Unit Coordinator will complete the six units within a period of 8 weeks. At least 2 (or 3) units will be completed in 4 weeks.

   A. Upon completion of each unit, the Unit Coordinator will submit the unit to a teacher reviewer. This will expedite reviewing of the units.

   B. If it is found through the Teacher Reviewer's written report that corrections are necessary, the Unit Coordinator with the advice of the Planning Coordinator will make the necessary corrections to complete the unit.

   C. When the unit is completed and revised, it will be reviewed by members of the Advisory Board.

   D. If it is noted from the evaluation of the Advisory Board Committee members that further corrections are necessary to complete the unit, the Unit Coordinator, with the advice of the Planning Coordinator, will make the necessary revision to complete the unit.

## TEACHER REVIEWER: DESCRIPTION AND RESPONSIBILITIES

### SUMMARY

The Teacher Reviewer will function as an evaluator of the units to determine their feasibility. After teaching a portion of the unit for one (1) week, the Teacher Reviewer will have one (1) week to submit a written report emphasizing strong and weak points in the unit, possible alterations, material in excess, additional material needed, and the students' attitude toward the unit. Put simply, the Teacher will advise as to whether or not the unit is teachable. He will have two (2) weeks to present a selected portion of the material to students and submit a written report. The Teacher Reviewer will also meet with the Unit Coordinator to clarify his evaluation.

### DETAILS

1. The students will be the Teacher Reviewer's main source of evaluation; he will determine from his presentation of the selected material of the unit to a given class if (1) the material can be easily taught, (2) if the objectives stated in each unit are fullfilled, (3) if the children's attitudes toward the material is favorable, (4) and if the material can be easily incorporated into the classroom without excluding the activities a teacher might have planned.

2. The Teacher Reviewer will be given one (1) week to teach a selected portion of the unit.

3. The Teacher Reviewer will be given one (1) week to prepare and submit a written report reviewing and evaluating the unit; the report should cover all information stated above. In the written report the Teacher Reviewer will also add any information in regard to changes he would make in the unit. The Teacher Reviewer's attitudes toward the unit should be included in the written report. An oral report to the Unit Coordinator will help clarify particular problems with individual units.

## TEACHER REVIEWING PROCEDURES

To be included in Teacher Reviewer Report:

1. Appropriate length of time required to present unit.
2. Ability to coordinate with existing curriculum.
3. Appropriateness of material.
4. Level of difficulty.
5. Ability of unit to meet overall goals and objectives:

| GOALS | OBJECTIVES |
|---|---|
| **Language Development**<br>-Concept Development<br>-Vocabulary Enrichment<br>-Verbal Facility | **Language Development**<br>-Specify verbal skills to be acquired<br>-Identify concepts to be developed<br>-Select vocabulary lists and definitions |
| **Career Awareness**<br>-Career Possibilities<br>-Economic Relationshps<br>-Environmental Implications | **Career Awareness**<br>-Define key occupations and job descriptions<br>-Specify concepts to be developed<br>*Occupational interrelationships<br>*Economic factors affecting key occupations |
| **Unit Characteristics**<br>-Flexibility of Application<br>-Inherently Complete<br>-Sequentially Integrated | **Unit Characteristics**<br>-Specify instructional alternatives appropriate to each other<br>-Identify horizontal and vertical relationships of each unit and all other affiliated units |

6. Material in excess.
7. Additional material needed.
8. Students' attitude toward material (interest, lack of interest)
9. Suggested alterations
10. Overall: a. strong points
    b. weak points
11. Teachability (unit organization)
12. Teacher's attitude toward unit.
13. General impression, merit, worth.

Although these procedures may seem endless and unnecessary, they are for a purpose--that of quality. Once the Unit Coordinator understands the operation of preparing a unit, the other units should be able to be produced with as little frustration and adjustments as possible. Remember: The first time is always the most difficult. (I take for granted that I can walk.)

One more thing: What is our product?

Innovation! And please do.